APPENDIX

PUBLISHED PAPERS OF RESEARCH SCHOLAR RELEVANT TO THE RESEARCH STUDY

PAPER 1


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MINDFULNESS BASED COGNITIVE BEHAVIOR THERAPY IN MANAGING PERSISTENT PAIN
A Report of Experience in Clinic Setting and Training Healthcare Professionals

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Abstract: Persistent pain and sustained stress are interlinked complex conditions that require multimodal approaches to management. Cognitive Behavior Therapy (CBT) is an effective and well established adjuvant psychotherapeutic intervention that complements medical treatment in chronic pain management. Mindfulness is a concept developed from the ancient yoga
philosophy and meditation traditions of India. Mindfulness has been integrated with psychotherapy and has been found to be an effective intervention in several chronic mental and physical conditions including persistent pain. Mindfulness Based Stress Reduction (MBSR) program for chronic pain is such a program used worldwide in recent times. This presentation reports the clinical experience of using a brief modified version of an office adaptation of the therapy termed Mindfulness Based Cognitive Behavior Therapy (MBCBT), in an Indian City clinical practice setting. It also reports the feasibility and effectiveness of a short-term training program in MBCBT for healthcare professionals engaged in managing persistent pain.

**Index Terms:** Cognitive Behavior Therapy, Mindfulness, Persistent Pain

I. Introduction

Persistent pain affects the body and the mind. The causes may vary but they show certain patterns of emotional distress. The pain can be associated with several other symptoms like weakness, fatigue, heaviness, tightness, numbness and tingling, disturbed sleep, loss of appetite, irritability, anxiety, sadness, decreased concentration and motivation. This restricts and modifies many of the activities and life decisions of the sufferer. This can considerably alter the course of his/her life [1]. Usually the patients seen in a neuropsychiatric clinic would have tried several medical treatments and visited many professionals with variable and short term relief. The challenge for the patient is in pain reduction, reduction of mental tension and optimization of social and occupational function. The challenge for the therapist lies in guiding and empowering the patient in taking charge of their condition and successfully self-managing their symptoms so as to resume productive life. This requires a complete acceptance of their condition, a systematic understanding of their situation followed by a program of effective management.

Cognitive Behavior Therapy (CBT) is a form of psychological therapy. It can help manage several health related issues by a systematic process. CBT is about effectively managing our distress by changing the ways we think, feel and behave through awareness, training and practice. The principles and techniques can be easily incorporated into clinical practice to guide others, to empower them to effectively manage their distress and to lead meaningful lives. There is strong and accumulating scientific evidence for the effectiveness of CBT and its modifications in several conditions either alone or in combination with other therapies in adults, elderly, adolescents and school age and above children. CBT in chronic pain has been well studied and used as an adjuvant psychotherapeutic intervention that complements medical treatment [6].

Mindfulness is the skill of being aware of the present and ‘being’ in the present from moment to moment [5]. It can be learned and developed through training and practice. Such a skill has been shown to have profound positive outcomes in as diverse fields as learning and leadership to chronic pain management and mental health [2]. The techniques and practices have been derived from ancient Indian spiritual-philosophical traditions and practices of yoga and meditation [10]. We find the roots of mindfulness in the *Yoga Sutras of Patanjali* (circa 900 BCE), an ancient Sanskrit treatise on yoga [12].

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techniques that have been most studied in the West are based on Vipassana (circa 500 BCE) Buddhist meditation [4, 7]. Mindfulness based therapies have a mounting evidence base and are now being widely offered in several hospitals across USA and Europe [5]. Such therapies have been developed and integrated into contemporary medical practice by Western healthcare services increasingly today [9]. But such structured integrated service is not widely available in India. This is slowly changing as there is a resurgence of interest both among patients and professionals in holistic and integrative approaches to medicine and healthcare and in our ancient heritage.

Mindfulness based intervention for chronic pain was first developed and studied in Massachusetts Medical Center, USA [4]. Their program is now more widely available throughout USA and Europe and spreading to other parts of the world as the Mindfulness Based Stress Reduction (MBSR) Program [4, 9]. Mindfulness Based Cognitive Therapy (MBCT) has been more widely used in the USA for chronic mental health conditions [2]. When we trace the origins of both CBT and Mindfulness separately we find that both have their historical origins in Buddhism and yoga tradition of ancient India [4].

The author has been a trained practitioner of CBT for about 15 years and has incorporated mindfulness in clinical practice for about 10 years. Over the years this has led to the development a brief intervention program combining CBT with mindfulness: Mindfulness Based Cognitive Behavior Therapy (MBCBT). This emphasizes the behavioral component in equal importance to the cognitive and mindfulness components (cf. MBCT).

The components of a typical MBCBT session are: (1) Assessment/Reassessment (2) Counseling (3) Behavior Awareness and Homework (4) Education (5) Mindfulness and Self-Care Training (6) Cognitive Restructuring. These are not mutually exclusive and there is overlap. Each weekly session lasts for about an hour or more. In the sessions the patients are imparted the knowledge and skills to reduce distress and resume productive lives through: (1) Acceptance (2) Understanding and (3) Management (AUM). They are taught how to be more in control of their pain thereby empowering them to make positive choices in life. The modifications incorporated were prompted by experience, intuitive clinical judgement, cultural expectations of patients and the environment of an ambulatory small office clinical practice of a busy metropolitan city.

II. OBJECTIVES AND PURPOSE

This report highlights two aspects of clinical experience in treating persistent pain with MBCBT in an outpatient clinic setting: (1) To demonstrate the clinical effectiveness of brief Mindfulness Based CBT (MBCBT) in patients with persistent pain due to Work-Related Musculoskeletal Disorders (WMSDs) in IT Professionals with Repetitive Strain Injury (RSI) (due to chronic computer use a significant cause for morbidity and socio-occupational dysfunction in Bengaluru. The IT Capital) [11]. (2) To demonstrate the effectiveness and feasibility of a short-term training program in Mindfulness Based CBT (MBCBT) to Healthcare Professionals managing patients with persistent pain conditions due to WMSDs.
The purpose is to create an awareness especially among healthcare professionals of the existence of powerful psychotherapeutic interventions for persistent pain that can be used in a clinic setting and to encourage healthcare professionals who manage persistent pain to learn and incorporate these or similar approaches in their clinical practice.

III. DESIGN AND METHOD

The study was an open clinical observational study with mixed semi-quantitative and qualitative components. Complementing the objectives and purpose two simple studies have been presented: (1) Use of MBCBT in Patients with Persistent Pain due to WMSDs in a Clinic Setting. (2) Short-Term Training Program in MBCBT for Healthcare Professionals treating Persistent Pain due to WMSDs.

(1) Use of MBCBT in Patients with Persistent Pain due to WMSDs in a Clinic Setting: Subjects: A cohort of 10 patients, nine IT Professionals and one journalist, with persistent pain in WMSDs due to RSI resulting from chronic computer use, referred to a neuropsychiatric clinic were randomly chosen and followed-up for six months. Six were male and four females. Age range was between 20 and 50 years. Duration of the condition ranged from 1.5 years to 10 years. They were asked to rate two aspects: 1. Pain Intensity and 2. Subjective Distress (due to pain). A simple visual pain-distress rating scale (0 – 10) (routinely used in clinical practice) was used (Appendix 1) [8]. Baseline scores were the ratings taken on the first assessment before the commencement of therapy. Subsequent ratings were those taken during the Week 4, Week 12 and Week 24 follow-ups respectively. Table I (a) and I (b) give the patient details and scores respectively.

<table>
<thead>
<tr>
<th>TABLE I (a): Patients (Pt) Receiving MBCBT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subject</strong></td>
</tr>
<tr>
<td>Pt 1</td>
</tr>
<tr>
<td>Pt 2</td>
</tr>
<tr>
<td>Pt 3</td>
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<td>Pt 4</td>
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<td>Pt 5</td>
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<td>Pt 6</td>
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<td>Pt 7</td>
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<tr>
<td>Pt 8</td>
</tr>
<tr>
<td>Pt 9</td>
</tr>
<tr>
<td>Pt 10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TABLE I (b): Pain Intensity /Subjective Distress Scale Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subject</strong></td>
</tr>
<tr>
<td>Pt 1</td>
</tr>
<tr>
<td>Pt 2</td>
</tr>
<tr>
<td>Pt 3</td>
</tr>
<tr>
<td>Pt 4</td>
</tr>
<tr>
<td>Pt 5</td>
</tr>
<tr>
<td>Pt 6</td>
</tr>
</tbody>
</table>
(2) Short-Term Training Program in MBCBT for Healthcare Professionals Treating Persistent Pain due to WMSDs: Subjects: Eight Healthcare Professionals, seven physiotherapist and one occupational therapist, treating persistent pain for WMSDs who completed the full course of the program. The program was for four days of six hours each staggered over two weeks. None of them had any previous knowledge of CBT or Mindfulness. The experiential course consisted of didactic lectures, videos, mock therapy sessions, homework, Mindfulness and Self-Care skills training and discussions. A pre-program test was completed by the participants consisting of MCQs and short note which were scored. At the end of the program they had to complete a final test comprising of both theory and practical evaluation that were scored. Table II gives the details and scores.

### TABLE II: Healthcare Professionals participating in Short-Term 4-day MBCBT Program, Pre-Program Test and Post-Program Test Scores

<table>
<thead>
<tr>
<th>Profession</th>
<th>Sex</th>
<th>Pre-Program Test Score (5 Band)</th>
<th>Post-Program Cumulative Score (5 Band)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pro1</td>
<td>PT</td>
<td>F</td>
<td>2.2</td>
</tr>
<tr>
<td>Pro2</td>
<td>PT</td>
<td>M</td>
<td>3.0</td>
</tr>
<tr>
<td>Pro3</td>
<td>PT</td>
<td>M</td>
<td>2.5</td>
</tr>
<tr>
<td>Pro4</td>
<td>PT</td>
<td>F</td>
<td>1.7</td>
</tr>
<tr>
<td>Pro5</td>
<td>OT</td>
<td>M</td>
<td>3.0</td>
</tr>
<tr>
<td>Pro6</td>
<td>PT</td>
<td>F</td>
<td>2.7</td>
</tr>
<tr>
<td>Pro7</td>
<td>PT</td>
<td>M</td>
<td>2.0</td>
</tr>
<tr>
<td>Pro8</td>
<td>PT</td>
<td>M</td>
<td>2.7</td>
</tr>
</tbody>
</table>

PT = Physiotherapist, OT = Occupational Therapist  
Score Bands: Excellent = > 4.5, Good = 3.5 – 4.5, Need Attention = < 3.5

### IV. ANALYSIS AND RESULTS

(1) Clinical Use of MBCBT in Patients with Persistent Pain due to WMSDs: The 10 patients were available for follow-up for six months (24 weeks). Though the patients were expected to have received four weekly-sessions of MBCBT before the fourth-week follow-up report, seven patients attended the four sessions and three attended two sessions only. The patients had the flexibility of reporting follow-up progress either by attending clinical follow-up appointments or through phone or E-mail follow-up. Table III shows the mean of the scores for Pain Intensity and Subjective Distress. Figure 1 depicts the same in the form of a bar-diagram.

### TABLE III: Mean Scores of Pain Intensity and Subjective Distress

<table>
<thead>
<tr>
<th></th>
<th>Pain Mean</th>
<th>Distress Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline (First Visit)</td>
<td>8.4</td>
<td>7.8</td>
</tr>
<tr>
<td>Week 4 Follow-Up (1 month)</td>
<td>7.2</td>
<td>4.5</td>
</tr>
<tr>
<td>Week 12 Follow-Up (3 months)</td>
<td>7.2</td>
<td>4.2</td>
</tr>
<tr>
<td>Week 24 Follow-Up (6 months)</td>
<td>6.3</td>
<td>3.0</td>
</tr>
</tbody>
</table>
x-axis = Follow-up time, y-axis = Pain/Distress Score

![Chart](image)

**Fig. 1: Change in Pain Intensity and Subjective Distress over time**

We can see that there is a reduction in both the scores at all the follow-ups. The improvements are sustained over the time period. One thing of note is that the reductions in pain intensity are relatively less than the reductions in subjective distress. Is this significant? A Two-Factor ANOVA (Analysis of Variance) with Repeated Measures on Both Factors was computed. The summary of the results are given in Table IV.

<table>
<thead>
<tr>
<th>Source</th>
<th>SS (Sum of Squares)</th>
<th>df (Degree of Freedom)</th>
<th>MS (Mean Square)</th>
<th>F (F-Statistic)</th>
<th>P (Probability)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subjects</td>
<td>28.05</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within Subjects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A (Row variables)</td>
<td>115.2</td>
<td>1</td>
<td>115.2</td>
<td>152.461</td>
<td>&lt; 0.0001</td>
</tr>
<tr>
<td>Subjects x A</td>
<td>6.8</td>
<td>9</td>
<td>0.7556</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B (Column variables)</td>
<td>126.45</td>
<td>3</td>
<td>42.15</td>
<td>35.5097</td>
<td>&lt; 0.0001</td>
</tr>
<tr>
<td>Subjects x B</td>
<td>32.05</td>
<td>27</td>
<td>1.187</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A x B</td>
<td>22.5</td>
<td>3</td>
<td>7.5</td>
<td>16.1987</td>
<td>&lt; 0.0001</td>
</tr>
<tr>
<td>Subjects x A x B</td>
<td>12.5</td>
<td>27</td>
<td>0.463</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>243.55</td>
<td>79</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

We can see that the probabilities (p values) of the within-subjects measures are significant. It is the subjective distress that is significantly reduced as compared with the pain intensity itself. This is expected as the MBCBT approach brings about change in attitude towards the condition and hence a change in perception of pain thereby reducing the distress experienced. The patients reported that the knowledge and skills acquired clarified concepts about chronic pain, produced a positive state of mind, better coping with stress, improved thinking and better decision making.
(2) Short-Term Training Program in MBCBT for Healthcare Professionals Treating Persistent Pain due to WMSDs: Eight healthcare professionals treating chronic musculoskeletal pain completed the full program of four days, though 13 professionals had enrolled initially. The reasons for non-attendance were work commitments and ill-health. All the professionals had only heard of CBT but had not received training to use it. None were aware of Mindfulness or its application in therapy. Table II shows the difference in the scores between the Pre-Program Test and the Post-Program Cumulative (Theory and Practical) Test Scores. The practical assessment was done through observing and evaluating mock therapy sessions. All participants were asked to provide feedback of their experience of the program. These outcomes are a reflection only of a cognitive awareness of a skill and not indicative of any expertise. The value and effectiveness of a skill can be known only once they start using the skills with patients regularly, receive further supervision and are evaluated subsequently. Figure 2 shows the Bar-Diagram highlighting the change in knowledge and skill awareness. Table V summarizes the results of a One-Way ANOVA of Correlated Samples.

![Figure 2: Short MBCBT Training Program for Healthcare Professionals: Pre-Program and Post-Program Test Scores](image)

**TABLE V: Summary of One-Way ANOVA for Correlated Samples**

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>15.806</td>
<td>1</td>
<td>15.806</td>
<td>207.09</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Error</td>
<td>0.5344</td>
<td>7</td>
<td>0.0763</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subjects</td>
<td>1.2794</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>17.6144</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The probability p value is less than 0.0001 which is significant. Subjectively the participants reported that they had a better understanding of persistent pain, personally learnt techniques to reduce their own stress, became aware of counselling skills, learnt new ways of assessing pain,
and they were motivated to use mindfulness in their own lives and in therapy for patients.

V. DISCUSSION

Normal pain is a sensory and emotional experience. It is a normal psychophysiological response to damage or threat to the integrity of the organism. It triggers a defensive response. Once the immediate threat is effectively managed it then activates the healing process in order to restore the integrity.

Persistent pain is abnormal pain. It is pain that occurs without damage or threat to the integrity (of the body/mind). Or the pain lasts beyond natural time for healing. Or the pain is out of proportion to any defects noted on examination or lab tests. This pain is not serving any useful purpose. Therefore ‘normal’ ways of dealing with abnormal pain are not effective [3]. But the mind-body becomes sensitized and conditioned to certain default ways of responding as if there is an acute pain situation. This then requires an awareness of this process, an understanding of the aberrant mind-body responses, breaking habitual and maladaptive ways that have been learnt by default in dealing with the pain, reestablishing normal sensitivity and reconditioning the mind-body system [1].

Mindfulness brings about greater awareness and greater control over responses [4, 5]. Behavior activation techniques help learn new ways of engaging in activity and coping. Cognitive restructuring is a technique of cognitive therapy that helps identify, challenge and modify habitual thinking patterns so as to change those and establish adaptive ways of thinking and feeling reducing distress and aiding better decisions [3]. Thus MBCBT helps the individual to gain new insights, providing for a paradigm shift in relation to his/her pain and suffering and so be empowered to take charge of the pain. Persistent pain due to WMSDs shares the underlying mechanisms of chronic pain. The basic principles of CBT and mindfulness can be applied to several conditions but has to be adapted and modified according to the condition and also the person being treated. This can come through training, supervised practice and experience [3, 4].

All of the patients referred for MBCBT included in this study were on different pain medications for a long time with variable relief and were also receiving physical therapy. They continued to be on these treatments all through the MBCBT program. While most patients were referred for psychotherapy as part of a multi-disciplinary approach to persistent pain management, a few of them were referred as they had reported psychological symptoms like depression and excessive anxiety. Psychological symptoms are common in patients with persistent pain and are seen in almost all patients that are referred to the neuropsychiatric clinic as a detailed psycho-social and mental state assessment is done. This may not otherwise happen routinely in a medical/surgical clinic. MBCBT particularly helps deal with the psychological issues which sometimes may not be related to the chronic pain per se. We can say that MBCBT can be a part of an integrative approach. It can be complementary to other therapies thus providing a holistic approach to pain.
management. Some patients have needed further ‘booster’ sessions to refresh, retrain, rehearse and reinforce their skills of self-management. But by and large, in my experience, the changes are long lasting even after a few sessions. This may possibly dependent on certain personality characteristics and traits of the patient.

Training in MBCBT is an experiential process. As the human conditions of pain and suffering are universal, therapists are not immune to them. Besides in order to be able to impart new knowledge and teach new skills to patients, healthcare professionals need to be knowledgeable and skillful in the techniques themselves. In this context it is true that in order to be a good teacher one should be a good student. This requires that we ourselves regularly practice and know how to use these skills effectively. No intervention is without their adverse effects. It is imperative that the therapist is fully aware of the potential hazards of psychological therapies in general and mindfulness and related practices in particular [2, 4, 9]. It is important that therapists who want to use them solely or integrate such psychotherapeutic approaches into their practice, receive training and supervision from experts.

VI. CONCLUSION

Current approaches to management in healthcare are changing. When it comes to managing chronic conditions like persistent pain, integrative and multidisciplinary approaches have better outcomes in terms of reducing morbidity, reducing financial burden, reducing loss of productivity and man-hours. Transformative care is the new paradigm where the healthcare professional and the patient have equal participation in healthcare decision making and the emphasis is on empowerment for effective self-care [3].

This report is only a brief clinical observation of therapeutic tools that have not been widely accessed or used in routine clinical practice. This may be mainly due to lack of awareness both among the general public and healthcare professionals in this country, inability to provide the time for psychotherapy in a busy clinic schedule, and cost of good quality psychotherapy.

This report is severely limited. The samples are small and the study designs lack the required rigor of a randomized controlled study. Research with psychotherapeutic interventions is always difficult as we are dealing with the mind and human emotions which are very subjective, do not follow linear dynamics, can fluctuate widely and frequently and the accuracy of measurements cannot be certain. But the hope of this effort is that more people will be open to try and incorporate at least aspects of these approaches and also academic clinicians conduct more research into these approaches in our country, the land of their origins.

sarve bhavantu sukhinaha. sarve santu niramayaha.

sarve bhadrani pashyantu. makaschid dukha bhagbavet.

aum shanti shanti shantihi
May all be happy. May all be healthy. May all our perceptions be good. May none suffer. May there be peace everywhere.

Acknowledgment

I wish to thank Sarvasumana Association for this opportunity and for their support and encouragement to research in public mental health and neurosciences in India.

BIBLIOGRAPHY

APPENDIX 1

PAIN-DISTRESS SCALE

0 1 2 3 4 5 6 7 8 9 10

PAIN

0 1 2 3 4 5 6 7 8 9 10

DISTRESS
THE BEGINNING OF WISDOM IS THE PRACTICE OF MINDFUL ANALYTIC REASONING: HERMENEUTIC ANALYSIS OF SANKHYA YOGA IN THE LIGHT OF PSYCHOTHERAPY

Anand Ramanujapuram, MBBS, DPM, MD, Research Scholar in Medical Science, JJT University, Jhunjhunu, Rajasthan Neuropsychiatrist & Medical Psychotherapist, Bengaluru

Abstract:

Introduction:
Wisdom has recently been considered as a valid concept of scientific investigation. Wisdom is often associated with maturity and age. Wisdom is a multi-dimensional construct with cognitive, emotional, social and spiritual components. Wisdom is often associated with philosophy. Philosophy encompasses the use of logic and analytic reasoning. Wisdom leads to insight. In therapeutic terms this could be conceptualized as an extension of psychotherapy in its broadest definition. Mindfulness is a recent concept, derived from the philosophical and spiritual wisdom traditions of India, gaining grounds in modern psychotherapy.

Sankhya Yoga forms the second chapter of the Bhagavad Gita, the Sanskrit scripture which is part of the great Indian epic, the Mahabharata. The Bhagavad Gita is considered as one of the classical texts of Yoga and its philosophy and practice. The Sankhya philosophical tradition forms one of the six such
traditions of Indian philosophy called Sankhya Darshana seen as leading to emancipation. Sankhya Yoga, has been interpreted variously as knowledge, logical analysis, analytical reasoning, wisdom, etc. For the present purpose it is translated as the practice of Mindful Analytic Reasoning.

Objectives:
The objective of this study is to use the qualitative analytical technique of hermeneutics applied to the Sankhya Yoga part of the Bhagavad Gita using the modern concept of psychotherapy as a preliminary groundwork towards wisdom and explore its potential utility as a therapeutic foundation technique of wisdom as psychotherapy.

Design and Method:
Hermeneutics is the study of interpretation and meaning. It is derived from philosophy of science. It is a qualitative research analytical method well suited for the study of ancient literature. This method is used to explore and interpret the Sankhya Yoga as a preliminary foundation towards wisdom in psychotherapy.

Results:
The exploration reveals modern conceptualization of wisdom and its multidimensional components were as relevant and present in the content of these ancient scriptural aphorisms. The pragmatic nature of the propositions become apparent: Mindful Awareness, Duty without Desire and Achieving Equanimity. The potential therapeutic nature of the study of the text and experiential application for personal transformation can be demonstrated. Further it is proposed that Sankhya Yoga can form the basis for modelling a foundational wisdom method of psychotherapy.

Conclusion:
Wisdom can be a modern therapeutic construct and a valid therapeutic concept much valued in the ancient traditions. The Sankhya Yoga, conceptualized as Mindful Analytic Reasoning, described in the second chapter of the Bhagavad Gita, a classical manual of Yoga and a revered scripture, can be understood as a pragmatic application of a traditional wisdom practice and as a potential preliminary intervention technique in wisdom based psychotherapy.

Key Words: Wisdom, Psychotherapy, Bhagavad Gita, Sankhya Yoga, Mindful Analytic Reasoning

“The beginning of wisdom is found in doubting; by doubting we come to the question, and by seeking we may come upon the truth.” Pierre Abelard, medieval French scholastic philosopher, theologian and preeminent logician

Introduction:
The concept of wisdom is very ancient. Throughout civilization we encounter in history the reverential place wisdom has occupied. It is seen as a most desirable precious quality or aspect of an individual to be endowed with. A
person possessing wisdom or a ‘wise man’ has always been considered as one worthy of great respect and an asset to the community and society. Wisdom is seen as a sign of great maturity. Even today, in many cultures, people with difficulties or conflicts, that they have not been able to resolve, approach their wise elders. Wisdom is often associated with philosophy and spirituality. Philosophers are considered to be wise people and likewise a spiritual person is also seen as being wise.

In the Indian culture, we see the importance of wisdom in many everyday practices. Elders and teachers are assumed to be possessed of wisdom. Therefore the younger members are expected to treat them with great respect and show this through their actions and gestures. Prostrating, touching the feet and giving them priority and importance and serving them are customary and traditional practices. By doing so the younger generation are seen to be doing good karma and also benefitted through the elders’ wisdom and blessings. In fact, in the ancient Vedic tradition, the wise, which included one’s parents, teachers and guests, were considered equivalent to the Gods. We also see that the notion of wisdom is also prevalent in all the major religious traditions of the world as referred to in their scriptures and ancient traditional practices.

Science of Wisdom

The scientific study of wisdom is a recent concept. Wisdom is gaining increasing attention from neuroscientists and clinicians as a useful concept for understanding and its potential for therapeutic applications. Eric Erickson was a pioneer among modern psychologists to introduce wisdom as part of his personality development theory where wisdom is seen as a trait of successful matured personality in later life. Baltes and colleagues are among the modern scientists to study wisdom extensively. They conclude wisdom as the pinnacle of all achievements of a human being. Wisdom is conceived as “expertise in the pragmatics of life serving the good of oneself and others.” In Sternberg’s balance theory of wisdom, the basis of wisdom is a high level of common sense or practical intelligence. In the modern scientific theories of wisdom, the core paradigm of wisdom is the acknowledgement of uncertainty and adaptability. As per the modern scientific theories, wisdom is a multidimensional complex of human traits with several components. Those components seen to be commonly occurring are: (1) rich life knowledge (2) good emotional regulation (3) being insightful (4) good social decision making ability (5) contributing to the common good (6) tolerance towards different values (7) openness to ideas (8) decisiveness (9) refined humour and (10) spirituality. A wise person is seen as one who not only thinks but also acts wisely.

Wisdom as Therapy

Health care and well-being are the areas of human endeavour where therapy is seen to have a role. Modern concept of health and well-being are multidimensional with not only physical but also psychological, social, environmental and spiritual wellness. There are several well established therapies with good evidence base for psychosomatic and mental health conditions. Cognitive Behaviour Therapy (CBT) is one such psychotherapy.
More recently, Mindfulness, a concept taken from Eastern philosophical and spiritual traditions, has been integrated with modern psychotherapy, especially with CBT. There is now established and growing evidence of the effectiveness of such techniques in the management of several chronic physical and psychological conditions. Broadly, psychotherapy facilitates improved awareness, emotional regulation, insight and improved problem solving skills. Some of the components of wisdom can be seen as being in common with the therapeutic outcomes of psychotherapy. Therefore it would be reasonable to conceptualize wisdom as a framework for healing and help lay a foundation for understanding and creating models of recovery, preventive health and well-being.

**Wisdom of the Bhagavad Gita**

The Bhagavad Gita forms part of the great Indian epic – the Mahabharata authored by the sage, Maharishi Veda Vyasa. Often referred to as ‘the Gita’, it is considered as a holy scripture in the Hindu religion. It is also considered as a synopsis of the extensive and rich cultural and philosophical tradition and spiritual Vedic heritage of India which is continuing from the ancient Vedic times. The backdrop of the Gita is a battlefield. Here Arjuna, a great and noble warrior is ready to fight, along with his brothers, against his greedy and cruel cousins who have taken over the kingdom by deception and ruling over it tyrannically. Krishna, who is considered an avatar of God, plays the role of Arjuna’s charioteer and who is also his good friend, philosopher and guide throughout. Seeing his own family and friends in the battlefield ready to fight a bloody and harsh war, Arjuna becomes greatly distressed, overwhelmed, disillusioned, full of doubt and depressed. Then, with great compassion and benevolence, Krishna expounds the Gita, which empowers and restores self-confidence to Arjuna. Arjuna then fights bravely and valiantly and conquers his enemies winning the battle and thus restoring justice and peace in the kingdom. The dialogue between Krishna and Arjuna is presented as a narration by Sanjaya, a wise counsellor, to the blind king Dritharashtra, father of the aggressing cousins.

Several indigenous and Western Indic scholars have emphasized the secular nature and universal applicability of the tenets of the Bhagavad Gita. Further, several scholars have highlighted the meaningfulness of the concepts expounded in the Gita to modern living and their relevance in different cultural settings. Several ideas of the Gita have similarities with the modern concepts of wisdom. Similarities as observed through quantitative and qualitative analysis include the enriching of life knowledge, emotional self-regulation, decisiveness, insight, humility, compassion, sacrifice, action for social good and spirituality. The aspects that are different and possibly have a more cultural context are complete faith in and surrender to God, doing action as a duty and responsibility without expectation of results, self-effort and self-contentedness as desirable qualities. Further, the emphasis is on Yoga or integration for holistic living and achieving the ultimate liberation from the desire-ridden material world and communion with the universal or God consciousness.

**Analytic Reasoning and Affective Mood States**
The ability to reason is what distinguishes man from the rest of the animal kingdom. Reasoning is the highest level of thinking capacity. There are generally, two types of reasoning: One is the instantaneous, instinctive, associative and effortless type of reasoning. This is protective and essential for survival and is operational during crisis and threats. This is a fight-flight response and a function of lower neurophysiological processes. The second type is the slow, intuitive, deliberate, effortful and analytic type of reasoning. This takes into account knowledge and experience and a weighing of alternatives before a decision is made. This is called salience of decision making and is a function of higher cortical processing in terms of neurophysiology and psychology. Even this second type, though it may seem a better form of reasoning may still be coloured by one’s feelings or emotional state. Hence the outcome can be determined by the prevailing mood. It is not essential that a positive mood state may produce a more positive decision and vice versa. There are times when a better decision is made in a negative mood state. This has been demonstrated through psychological experiments as well. We see this in the creative expression of artists and musicians who have excelled at times of adversity and dejection in their lives. In terms of therapy, when a subject is demonstrating errors under the first type of reasoning, he/she is less likely to be amenable to correction as they are under substantial emotional and cognitive load or pressure. Therapy is more likely to be effective and the subject more amenable to correction when they are accountable and take ownership and responsibility for their decisions. Even here the process can be prolonged and dependent on the prevailing affective mood state as this can affect the cognitive analytic reasoning process.

**Mindfulness and Mindful Analytic Reasoning in Psychotherapy**

In recent times, Mindfulness is a concept that is becoming more and more prevalent in psychotherapy as an effective tool. The concept of mindfulness has its origins in the ancient spiritual and philosophical traditions of India. It has especially gained recognition through Yoga and meditation especially through the Buddhist traditions that have more appeal to the modern scientific community. Mindfulness-based therapies come out of several robust systematic and randomized controlled research studies from prestigious academic and clinical centres from across the globe. To be mindful is to be aware or attentive or present. It is the moment to moment awareness of the present with a non-judgemental and non-reactive attitude. This increased awareness of sensations, impulses, thoughts and urges gives increased control over them allowing one to choose one thing over another. This is a skill that can be learnt and practiced and developed. Neuroscientific studies on subjects practicing mindfulness based techniques have revealed how neuroplasticity of the brain and the nervous system physiology can be affected in positive ways and sustained over extended time periods. In terms of therapy, such an ability can allow a subject to become more aware of physical and psychological processes and at the same time enhance his/her stamina and resilience to feel more in control and make wise choices whatever their prevailing affective mood state. In this study the attempt is to show how adding the technique of mindfulness to the analytic reasoning process can be a stepping stone to
wisdom as described in the Sankhya Yoga of the Bhagavad Gita, defined as Mindful Analytic Reasoning.

Sankhya Yoga: the Practice of Mindful Analytic Reasoning

The Gita has 18 chapters. The second chapter, which is also the longest, is called Sankhya Yoga. Sankhya in Sanskrit, literally means related to numbers or counting or logic and analysis. Sankhya Yoga, thus can be seen as an integrative practice of analysis through a logical and meaningful or reasoned process. Sankhya Yoga appears to resonate with a more extensive classical Indian philosophical school called Sankhya Darshana. The best known work of this school is that of an ancient Sanskrit scholar named Ishwara Krishna who attributes the philosophy to a still ancient Sage named Maharishi Kapila. Sankhya Darshana forms part of the six classical Indian philosophical schools. The others are: Yoga Darshana, Nyaya Darshana, Vaisheshika Darshana, Mimamsa Darshana and Vedanta Darshana.

The first chapter of the Gita is called Arjuna Vishada Yoga wherein is described the faulty logic and distorted reasoning used by Arjuna culminating in a doubtful, dejected and despondent state. So, in the immediate succeeding chapter, we can see how Krishna begins the process of correcting this distorted cognition and negative feeling state through the exposition of the Sankhya Yoga. There is a gentle and compassionate process of correction that unfolds through imparting of knowledge and facilitation of self-awareness, self-understanding and self-management, a process that can be termed Mindful Analytic Reasoning thus laying the foundation for wisdom.

Design and Method:

Hermeneutics

Hermeneutics is a qualitative research methodology. It is the systematic application of interpretation and deriving meaning. It has its origins in the German philosophical works most notably that of Heidegger and Gadamer as applied to the natural sciences. The principles guiding hermeneutics encompass six dynamic research activities: 1) commitment to an abiding concern; 2) oriented stand toward the research question; 3) investigating the experience as it is lived; 4) describing the phenomena (through writing) 5) reframing (rewriting) and 6) consideration of parts and the whole of phenomena (gestalt). The method used is referred to as a hermeneutic circle. This comprises of reading, reflection (or reflective writing) and interpretation. Paradigm is essential for research. When applied to the qualitative research tradition this includes metaphysics, methodology, quality and ethics.

In the traditional Indian context, there is a Vedic tradition of interpreting important scriptural works through editorial, explanatory and expositional commentary called Bhashya by Vedic teacher-philosophers called Paramacharyas. In this sense too it makes hermeneutics a suitable method for studying the present paradigm. The present study is an attempt using the
modern concept of psychotherapy in its broadest sense as an instrument for hermeneutic analysis of the second chapter of the Gita called Sankhya Yoga.

The Bhagavad Gita is an ancient literary and philosophical scripture in the Sanskrit language. Although the author does not claim to have a formal expertise in neither ancient Indian philosophy nor the Sanskrit language, he has some knowledge of both, by way of being a hereditary student and practitioner of Yoga and the Vedic tradition. Reliable translations and Sanskrit dictionaries have been consulted.

**Psychotherapeutic Hermeneutics of Sankhya Yoga and the Beginning of Wisdom**

In Sankhya Yoga, Sanjaya, who is providing a running commentary of the happenings on the battlefield to Dhritarashtra, thus narrates: Krishna, also known as the destroyer of delusion, having listened fully to Arjuna and seeing that he was tearful with his eyes lowered and recognizing that he was overwhelmed with sorrow and self-pity, spoke to him with compassion. He begins by encouraging Arjuna to pause and attend to the origins of his misery. He poses him the question, from where upon had arisen this dejection, perilousness and crisis, when clearly it was against the nature of nobleness, goodness and honour that were his identity. He encourages him not to yield and become disempowered as it was against his nature. Addressing him as one capable of great effort he advises him to give up negative self-perception of worthlessness and self-assumption of faint-heartedness and to bring greater self-awareness into his being. In other words, Krishna gently encourages Arjuna to become mindful of himself and his situation without judging and reacting.

Arjuna, continuing with his doubt, asks Krishna, how he could get himself to fire missiles against his own granduncle, Bhishma, and his revered teacher, Drona (who were fighting on the side of the cousins), who were in fact so great that they were worthy of worship. He considers that it would be far better to live by begging than to slay such great masters and think that he could live happily, as such a living would be tainted and guilt ridden. If in the battle he were to slay all his cousins, he doubts what would be better, conquering or being conquered as then he wold not care to live. But in the midst of this doubt, he admits that his nature was burdened by disempowerment which had confused his understanding. He now places his trust in Krishna to guide him as a teacher for he was unable to find any remedy for his despair which was so overpowering that nothing would matter even if he were to be the unrivalled and the richest ruler of earth and beyond. Thus he surrenders completely to his plight with the resolve not to fight.

Krishna with a smile now gently encourages Arjuna to become mindful of how he was thinking. He begins by proposing that Arjuna had made conclusions about events that had not yet happened and he was grieving for those who perhaps did not deserve it but yet he appeared to speak as if out of wisdom.
Krishna continues that the truly wise should grieve neither for the living nor for the dead. With this, is introduced the bold concept of the indestructible nature of the spirit or vital force or vital energy within all sentient beings. It is neither created nor destroyed. In the cycle of continuity called samsara where the will and volition to exist and continue is that force or energy or spirit that is constant in the universe and so in this sense none was non-existent and none would cease to exist in the future. The spirit went through childhood, adulthood and old age and then passed on to another state. This appears to be similar to the law of conservation energy – energy can neither be created nor destroyed; rather, it transforms from one form to another. A deep meditation on this and understanding would make one peaceful.

Perceptions are created when the senses come in contact with the objects in the universe. Further these create feelings and so aversions and pains, and desires and pleasures. These are not permanent as they come and go. One can learn to not be affected by them by cultivating patience by observing them without coming under their sway in a reactive way - mindfully. These cease to torment a person who is balanced and steadfast through practice and is fit to attain wisdom. Perceptions can be misleading and not objectively real or existent. That is real which is indestructible – the spirit, as realized through wisdom.

Recognizing the indestructible nature of the spirit is emphasised in different ways as the beginning of wisdom. The next emphasis is on duty. Duty was to uphold goodness or righteousness or ethics and values of living. Hence engaging in actions which were ones duties i.e. responsible actions, would free one of legitimate guilt. Cultivation of this awareness or this self-knowledge would help one to overcome life’s hurdles.

Krishna then motivates Arjuna by saying that the proof of this was in the practice. It would not be a wasteful exercise as there was no adverse effect and engaging even in a little practice would begin to show by reducing negativity. Becoming reactive to desires and aversions would be deceiving oneself and others by creating unreal goals and clinging to pleasures and power which only lead to misery in the end. The mind would then become unstable and one would be robbed of their discriminating ability.

By observation and self-awareness, by becoming more and more mindful, remaining balanced and being centred in the self (as opposed to being self-centred) the door to wisdom would be opened. One’s rights and claims are on one’s actions in the form of duties alone, and never on their results. Duty was to be performed therefore for duty’s sake not in the expectation of a specific result. In doing so, one should be careful not to associate with inaction. Performing duties with an even mind being steadfast and balanced without anticipation of success or failure one gained equilibrium leading to equanimity. In equanimity one was able to perform actions that would be deemed to be wise. Inferior were actions which had specific motives as they were unstable pushing the performer into desperation. In equanimity one rose above not only bad deeds but also the so called good deeds, and actions became efficient and creative. Performing duty devoid of motives and the mind in equanimity would
lead one to wisdom that could further lead to true freedom and towards a pure state of consciousness. When understanding transcended distortions of thinking one became unperturbed to perceptions of past, present and future. When the intellect attained equipoise in the wake of conflicting opinions one was in a ready state for wisdom.

At this juncture, Arjuna became composed and attentive. He asked Krishna, how would one know that a person was established in wisdom and how would one recognize such a person? Krishna then goes on to describe the characteristics of a wise person. A wise person was contented and self-sufficient. A person whose mind had attained steady wisdom was not perturbed by adversity. The mind was not swayed by extremes of feelings, either negative like fear and anger or positive like happiness and fondness. The mind would be neither too excited at receiving so called good things nor too dejected at experiencing trauma. The wise person would be in control and not swayed by sensations aroused by objects or events outside. The senses were so powerful that they could easily lead astray even the mind of a wise person. When intuitively the wise had gained the full knowledge of the self then the senses remained in full control.

Man developed unhealthy attachments to sense objects by habituation. Through this unhealthy desires and cravings arose. When the cravings were not satisfied this led to dissatisfaction giving rise to anger. Misdirected anger deluded the mind and confused the memory which then led to ruin of reason. Ruin of reason was the harbinger of a self-destructive cycle.

By the practice of reasoned logical analysis as expounded, with disciplined practice one could manoeuvre the senses and regain tranquillity becoming free from aversions and attractions. The tranquillity so achieved destroyed suffering as the tranquil mind got anchored to equilibrium. When the mind became fickle and swayed by the senses, going after sense objects that mind was said to be not meditative and wisdom could not be established in such a mind. The roving senses carried away discrimination. Hence one had to practice restraint through reasoned logical analysis. The power of discrimination was high in a wise person. Such a person would be able to see through deceptions. What would be light to the wise may be dark to others and what the wise perceived as dark the others may falsely mistake for light.

The one well established in wisdom attained peace as all sensations entered him/her just as rivers entered the ocean that ever remained full and stable. Attaining such a state of super-consciousness there was no scope for bewilderment. In such a peaceful state one would be in communion or oneness with the universal consciousness or ultimate reality.

Thus, with this chapter the foundation is laid for Arjuna to become composed and become more discriminating – the beginning of wisdom. Through mindful analysis with logic and reason he is helped to think with increased clarity and he finds himself emboldened and able to ask further questions. The succeeding chapters of the Bhagavad Gita explores further questions and concepts that ultimately lead to the emancipation of Arjuna. He then emerges empowered
and self-confident, resuming to face his enemies on the battlefield with renewed vigour and vitality.

This hermeneutic exercise itself had been personally therapeutic to the author as it appealed to both a scientific and objective mind of a professional and also at the feeling level by empathizing with the plight of Arjuna, a common encounter in clinical practice. The discourse from Krishna appealed directly to the conscience and was motivating and inspiring. It did not conflict with any of the modern tenets of psychology, neuroscience and medicine and for that matter any creed of theology.

Conclusion:

There is a popular saying in therapy, “Pain is inevitable; suffering is optional”. With the acceptance of the inevitable comes understanding. With increasing understanding we are in a better position to manage ourselves in spite of the adverse situation we may find ourselves in. Understanding is the beginning of wisdom. Understanding is a process that resonates with outcomes of psychotherapy. Mindfulness is a concept recently becoming more prevalent in psychotherapy that has its origins in the ancient traditions of India. The Bhagavad Gita is an ancient Sanskrit scripture of India revered as a practical manual for wise living. It has universal appeal and many of the concepts have parallels with modern scientific thinking. The scientific basis of wisdom as a concept in psychotherapy has potential practical relevance in clinical practice. The concept of wisdom is well established in the Gita. Sankhya Yoga, the second chapter of the Gita can be conceptualized as Mindful Analytic Reasoning, a practice that can lay the foundation for wisdom. Hermeneutic analysis of the Sankhya Yoga in the light of modern psychotherapeutic understanding especially Cognitive Behaviour Therapy and Mindfulness-based Therapy has been attempted to demonstrate the potential for use in therapeutic interventions for a broad range of conditions where suffering is a common factor. Although certain concepts may be seen as culturally oriented to Eastern traditional thinking, it has a broad and universal appeal and hence would be applicable with appropriate modifications and qualifications in a wider multicultural clinical setting. Future research could focus on empirical study of the methods proposed in a larger clinical setting. Further exploration and research in wisdom as therapy and particularly the Bhagavad Gita can be a worthwhile endeavour and enrich the understanding of human nature and also provide a therapeutic approach for preventive and transformative health, promotion of well-being and peace.

Declaration:

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