Chapter I
Introduction

The construct of equanimity has been traced back to ancient texts and indigenous systems of thinking. It has been developed as one of Buddhism's Four Immeasurables (Loving-Kindness, Sympathetic Joy, Compassion, and Equanimity), as well as one of the Shrimad Bhagavad Gita's main teachings. In traditional Yoga systems, such as *Ashtanga Yoga*, equanimity is also a key concept. While the concept has its origins in texts and spiritual beliefs, it has only lately gained popularity in Western psychology.

Recent studies in Psychology have focused on the question of how and why mindfulness leads to beneficial change. The established models of mindfulness (Baer et al., 2008; Bishop et al., 2004; Shapiro et al., 2006) all have in common, a component corresponding to acceptance and openness. According to Desbordes et al. (2015), this particular aspect of mindfulness conforms to the traditional definition of equanimity and has emphasized a need to articulate a conceptual benchmark for this construct. Thus, the aim of this research is to develop an expansive understanding of equanimity as a distinct psychological construct.

Introduction to Chapter I:

This chapter provides an introduction into the theoretical frameworks of equanimity in the psychological literature. The chapter begins with the need and importance of exploring equanimity as an indigenous psychological construct. Equanimity is an ancient construct elaborated in the native scriptures and traditional philosophies. To explore equanimity from its roots, the chapter traces the construct of equanimity as delineated in the Bhagavad Gita and in Buddhist philosophy.

The theoretical frameworks of equanimity in the psychological literature are outlined. Following which, the psychological processes related to equanimity such as acceptance, experiential avoidance, cognitive reactivity and insight into the nature of phenomena are elaborated. Following this, the theoretical distinctions between equanimity & mindfulness are outlined.

The existing scales and self-report measures of equanimity in the psychological literature are reviewed and critiqued. In the next section, the processes of equanimity implicit in modern psycho-

therapy are illustrated. The studies on equanimity as an outcome of contemplative practices are further discussed. Following this, the relation between compassion and equanimity is highlighted along with a discussion on the challenges faced in the cultivation of equanimity. Lastly, the key psycho-social variables of the study such as neuroticism, loneliness, emotional reactivity, social media addiction, well-being, and their relation to equanimity are discussed.

1.1 Need for Exploring Indigenous Psychological Constructs

In response to an increasing research interest in contemplative practices, there has been a rising trend in focusing on their role in well-being and optimal mental health. Most of the research on well-being in India has been influenced by Western models and there is a lacuna of indigenous constructs developed in the Indian context. It has been emphasized that our native scriptures, texts, and traditions which are in-depth knowledge systems about the human mind and provide a holistic view of the human psyche have been largely neglected (Dalal & Misra, 2010).

Culture, society, and community have an immense impact on the psyche of an individual. Cross-cultural psychologists such as Tirandis (1994) and Bhawuk (2010) have repeatedly stressed the limitations and risks of simply adapting and copy-pasting theories from the West in other parts of the world without taking into consideration the cultural contexts. Western models and theories of Psychology embody the Western culture, ethics, and values that emphasize individualism and objectivity. This worldview may not necessarily apply to all cultures (Sloan, 1996). As a result, applying these models to non-Western cultures may result in a misunderstanding and distortion of their true reality (Misra, 1996).

As a result, instead of adapting ideas and models from the West, Psychology in India has to discover its roots in its indigenous wisdom. The holistic, complex, and in-depth theories of states of mind and consciousness have been studied in the ancient Indian scriptures and texts and have traditionally been considered as an essential part of self-learning or *Svadhaya*. Hence, the exploration of these scriptures, texts, and native folk wisdom may help to derive emic-embedded theories which may increase well-being and help navigate life's ups and downs (Bhawuk, 2010).

Durganand Sinha, the eminent Indian academician was one of the first noted authors to stress the need for Psychology as a discipline to be culturally relevant. He called for indigenization of the discipline by combining modern psychology with the richness and depth of the Indian knowledge

traditions (Sinha, 1981). Since then, notable psychologists such as Paranjpe (1998), Bhawuk (2003, 2008, 10), Misra, (1996, 2004, 2005), and Dalal (1996) have advanced indigenous constructs and theories that have helped to make Psychology culturally relevant.

To have a clear understanding of what constitutes a happy, content, and meaningful life, we need to understand well-being in our cultural context instead of relying on the Western lens of well-being. The concept of equanimity rooted in the indigenous schools of thought such as Hinduism and Buddhism can enrich the theories of Psychology and help cope with the various complexities and uncertainties of life.

Furthermore, with the expansion of Positive Psychology, which has been developed in the Western context, the recent emphasis is on sustaining or magnifying positive emotions and alleviating the impact of pain and suffering which may not sustain well-being in the long run (Desbordes et al., 2015). The development of equanimity as an indigenous construct of well-being would contribute to a more holistic understanding of well-being. In the next section, Equanimity will be traced from its roots from its conceptualizations in the Eastern traditions to the theoretical frameworks in the recent psychological literature.

1.2 Equanimity as conceptualized in the Bhagavad Gita and in Buddhism

Ancient traditions, texts, and scriptures provide the archival data that define a construct in its cultural context and its true essence. In this section, we briefly trace equanimity as delineated in Buddhism and the scriptures of the Shrimad Bhagavad Gita. The conceptualization of *Samatva* in the Bhagavad Gita and *Upekkha* in Buddhism along with the various cultivation methods are further analyzed in-depth in the qualitative results section in Chapter III.

The Bhagavad Gita has been translated into 80 languages and is a prominent source of knowledge and wisdom for the global community (Bhawuk, 2020). The Gita's philosophy is portrayed throughout 700 verses, set against the backdrop of a fratricide conflict and ethical issues.

Equanimity, or Samatva, is characterized in the Bhagavad Gita as being stable among dualities and having an even-mindedness toward objects, events, and persons. (Jijina et al., 2020). In Verse 6.81, Shri Krishna emphasizes having an equal attitude towards different objects, such as a lump of earth and gold and advises Arjun of being even-minded in the various polarities of life, such as pleasure-pain (Verse 2.14), and honor-disgrace (Verse 6.7). In addition, Shri Krishna elaborates

on the importance of being unbiased and impartial towards all beings, treating alike a friend/foe (Verse 14.25) and a comrade/stranger (Verse 6.9). To summarize, in the Bhagavad Gita equanimity or Samatva has been emphasized as even-mindedness towards experiences as well as towards all beings.

In the Buddhist tradition, the Pāli word for equanimity, *Upekkha*, refers to a mental state in which one neither clings to pleasant experiences nor evades unpleasant experiences. In Theravada Buddhist literature, there are two main usages of the term equanimity. First, it may refer to neutral valence, a mental experience that is neutral and which entails neither intensifying nor diminishing current states of mind. The second meaning of equanimity refers to a mental state or trait that is unaffected by biases, prejudices, and preferences and is even-minded in any kind of experience (Bodhi, 2000). Equanimity thus manifests as a balanced reaction to the dualities such as joy and misery. Most significantly, equanimity is based on a vigilant and compassionate presence of mind and is not to be equated with indifference or passivity (Bodhi, 2005).

Equanimity is also described as one of the four *brahma viharas* or divine abodes of mind which have been taught by the Buddha: *Metta* (loving-kindness), *Karuna* (Compassion), *Mudita* (Sympathetic Joy), and *Upekkha* (Equanimity). The cultivation of the brahma viharas helps in reducing anxiety, tension and promotes compassion and brotherhood. The other three sublime states are guided by equanimity. One can show compassion to extreme sorrow and suffering with the cultivation of equanimity. Equanimity also protects loving-kindness and sympathetic joy from spiraling into excessive emotion. The cultivation of equanimity thus brings the other three immeasurables into a profound state of balance (Wallace, 2010).

In the Mahayana tradition of Buddhism, equanimity may also be cultivated as a means for universal compassion and *Bodhicitta* training. The motivation of Bodhicitta expresses itself as the attainment of the highest possible enlightenment to serve and benefit others (Dalai Lama, 2001). Thus, the Buddhist traditions consider the construct of equanimity as the quality of impartiality or even-mindedness towards various hedonic experiences; it also includes reducing bias and attitude of equality towards all beings.

In summary, putting together both the conceptualizations from the scriptures of the Bhagavad Gita and Buddhist philosophy, equanimity is understood as even-mindedness, which counters clinging

and aversion. Both the Eastern traditions emphasize qualities such as impartiality and an equal attitude towards all. The conceptualizations and methods for the cultivation of equanimity from both the Eastern traditions are further elaborated in detail in Chapter III. The next section delineates the theoretical frameworks of equanimity in the recent psychological literature.

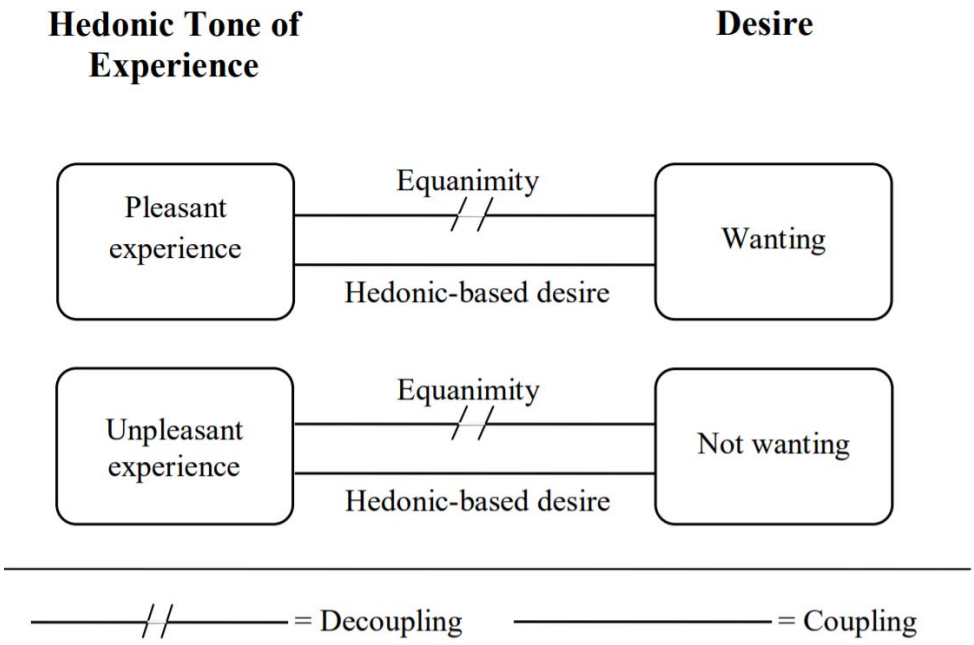
1.3 Theoretical Frameworks of Equanimity in the Psychological Literature

Equanimity is a valued state of mind and core teaching in scriptures, faiths and philosophies. However, it has received attention in psychology only recently. In one of the pioneering papers, equanimity has been defined as "an even-minded mental state or dispositional tendency toward all experiences or objects, regardless of their affective valence (pleasant, unpleasant or neutral) or source'' (Desbordes et al., 2015, p. 6).

Equanimity was proposed as "an intentional stance to neither hold on to pleasant experience nor push away unpleasant experience" (Olendzki, 2006, p. 286). Other definitions of equanimity include the holding back of judging or interpreting experience as intrinsically positive or negative (Farb, 2012). In one of the pioneering studies, Hadash et al. (2016) proposed the Decoupling model of equanimity. Their model suggests that in states of equanimity, desire (wanting/avoiding) is dissociated or not dependent on the pleasantness or unpleasantness of experience i.e. the hedonic tone of experience as shown in Figure 1 below. Their model proposed that equanimity is manifested by two critical factors: an attitude of acceptance and reduced reactivity towards experience.

Figure 1

The Decoupling Model of Equanimity

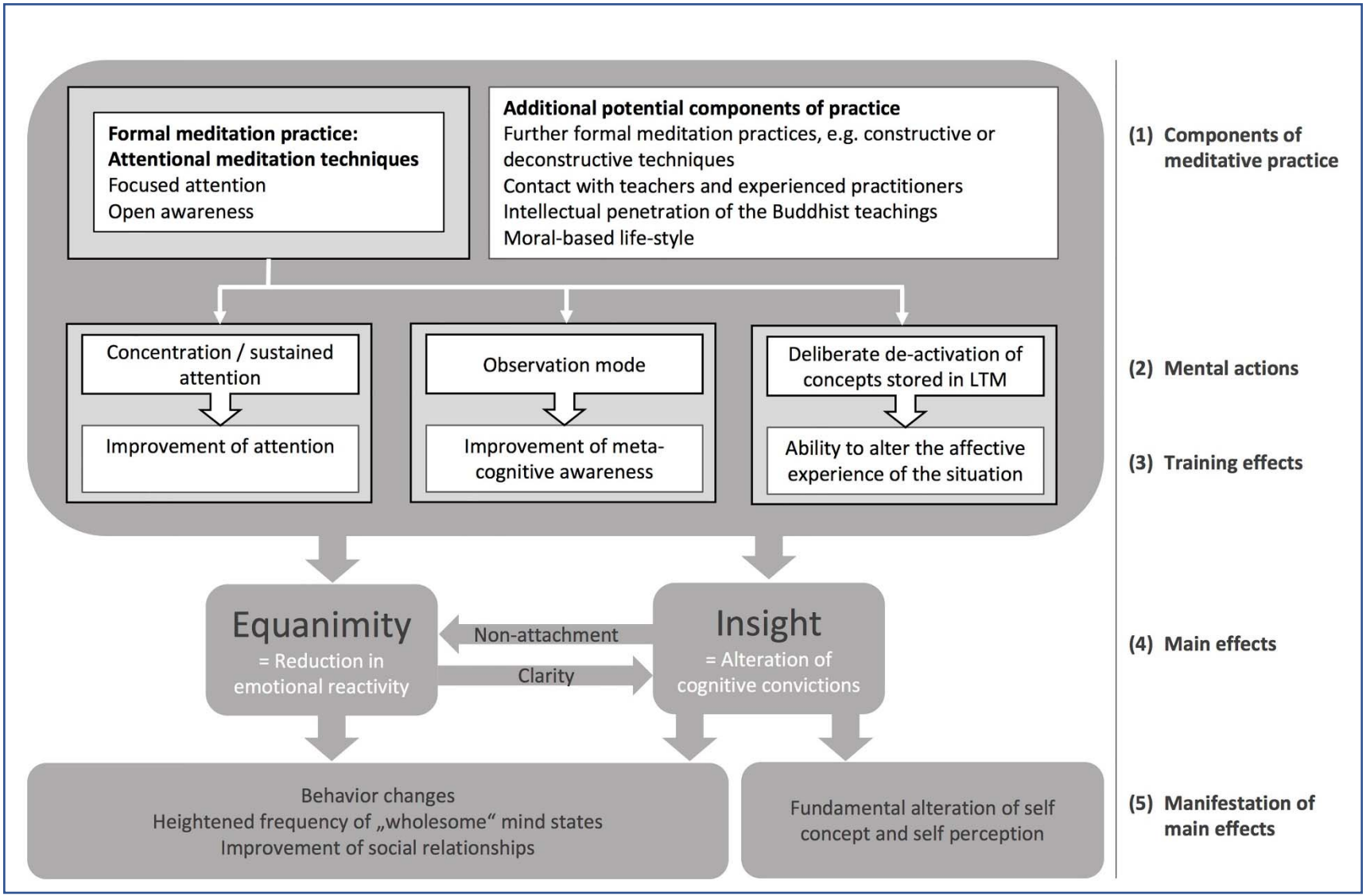


Note. From Decoupling Model of Equanimity. Theory, Measurement, and Test in a Mindfulness Intervention by Y. Hadash et al., 2016, *Mindfulness, 7*, 1214-1226.

The PROMISE model of Insight and Equanimity was based on interviews with experienced meditators (Eberth et al., 2019). The key effects of mindfulness meditation, according to this model, are insight and equanimity. Their model demonstrates that meditative techniques improve attention, meta-awareness, and the ability to modify how one feels about a situation. This may also lead to equanimity, which is aided by developing awareness into the conditioned and impermanent nature of all events. As illustrated in Figure 2, all of these impacts are represented through improvements in social relations, self-perception and self-concept.

Figure 2

PROMISE Model of Insight and Equanimity



Note. From "PROMISE: A model of insight and equanimity as the key effects of mindfulness meditation." by J. Eberth et al, 2019, *Frontiers in psychology*, *10*, 2389.

In a similar vein, equanimity was described as states of increased acceptance and decreased cognitive avoidance and the authors also reported that the cultivation of mindfulness was associated with increased equanimity Shoham et al. (2018). Other researchers described equanimity as a detachment to clinging or avoidance of ongoing experience which may further lead to a reduction in prolonged emotional processing, sympathetic arousal, and cognitive rumination (Vago & Silbersweig, 2012). In another study, Rodriguez-Carvajal et al. (2016) refer to equanimity as an attitude of openness, tolerance, and unconditional acceptance to inner or outer experience with reduced impulsive reactivity.

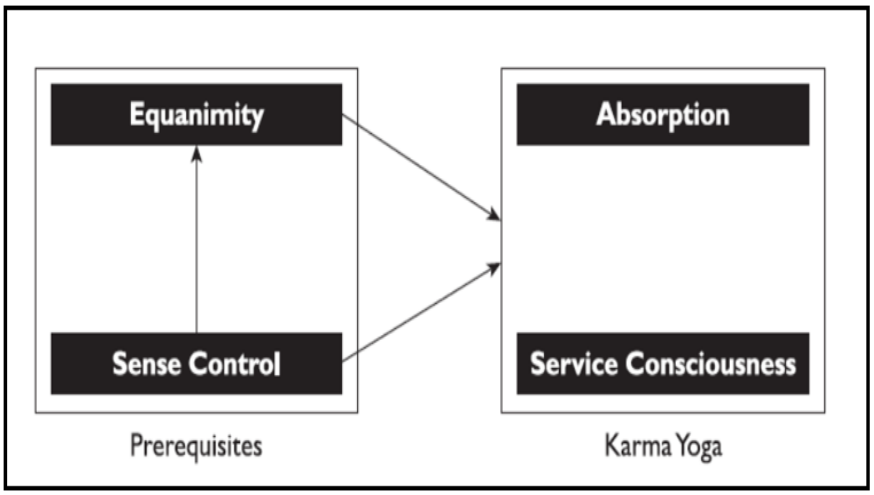
One of the most holistic definitions of equanimity was proposed by Weber who elaborated on equanimity towards hedonic experiences as well as towards other individuals. He has defined equanimity as a two-pronged construct: “Inner equanimity as open acceptance of non-reactivity towards your discrimination faculties (pleasure, displeasure, neutrality) so you can respond with compassion for self and External equanimity as accepting an individual’s discrimination faculties (pleasure, displeasure, neutrality), with patience so to respond with compassion for others” (Weber, 2020, p. 21).

All the above definitions were based on the Buddhist framework of equanimity. A few studies based on the construct of equanimity from the Bhagavad Gita have also been reported in the psychological literature as presented below.

In their qualitative research on their conceptual model of Karma Yoga, Rastogi and Pati (2015) suggested that equanimity is being emotionally stable in the face of both success or failure, happiness or grief. The authors claimed that sensory control, or the ability to delay gratification and manage one's desires, is related to one's level of equanimity. As illustrated in Figure 3, their model also suggests that sensory regulation and equanimity are pre-requisites for practising Karma Yoga.

Figure 3

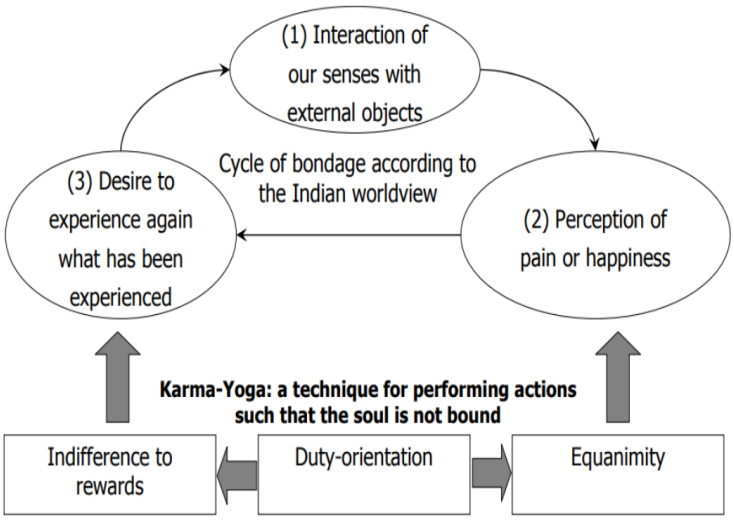
Conceptual Model of Karma Yoga



Note. From "Towards a Conceptualization of Karma Yoga" by A. Rastogi & P. Prakash, 2015, *Journal of Human Values 21*(1), 51–63.

In another study, the authors conceptualized Karma Yoga as an Indian model of moral development from the text of the Bhagavad Gita. In their model, Karma-Yoga is conceptualized of three dimensions- duty-orientation, indifference to rewards, and equanimity. In their model shown above, when the senses interact with external objects, it leads to the perception of pain or happiness. This perception may instill a desire to experience the pleasant stimulus again or a desire to escape/avoid in case of unpleasant experience. The individual may be caught in this endless cycle of desires which may entangle the soul to the cycle of birth and death. The model further suggests that to break free from this cycle of bondage, one should carry out their work by letting go of the desire for the results of their work, being indifferent to the rewards of one's actions, and enduring both pain-pleasure, success-failure with equanimity (Mulla & Krishnan, 2014).

Figure 4
Equanimity in context of Karma Yoga



Note. From "Karma Yoga: The Indian Model of Moral Development" by Z. Mulla & V. Krishnan, 2014, *Journal of Business Ethics, 123* (2), 339-351.

There have been certain studies that have elaborated on equanimity without the base of any philosophical or scriptural framework and have focused on equanimity in the sense of meaning-making. In another study, Astin and colleagues defined equanimity as being centered and grateful, being able to find meaning, and feeling content about the direction of one's life (Keen, 2010). Similarly, in another paper it was suggested that to maintain equanimity, a sense of meaning and purpose has to be cultivated (Van Tongeren & Green, 2010).

Thus, as seen above, in the psychological literature, equanimity has been described in the context of Buddhist philosophy, karma yoga, and meaning-making. The common theme in most of the definitions refers to equanimity as a state of even-mindedness in the varied hedonic experiences. In the next section, equanimity and its related processes will be discussed in the context of emotional regulation.

1.4. The Psychological Processes underlying Equanimity

The psychological processes underlying equanimity are described below.

Emotional regulation, refers to the conscious as well as unconscious strategies employed to raise, maintain, or reduce one or more components of emotional responses (Gross & John, 2003). Two types of emotional regulation strategies are elaborated by Gross and John: antecedent-focused emotional regulation and response-focused emotional regulation. Antecedent-focused emotional regulation occurs before the emotion arises, for example through avoidance of the situation. On

the other hand, response-focused emotional regulation occurs after the emotion by modulating one's response to the emotion such as distraction, suppression, or re-appraisal.

All the strategies described above require effortful control. However, equanimity as an emotional regulation strategy differs from the strategies above. For example, distraction is an emotional regulation strategy in which attention is deployed away from the triggering stimulus. Whereas in states of equanimity, attention is guided towards the triggering stimulus with an attitude of openness and acceptance. Similarly, equanimity also differs from the emotional regulation technique of cognitive re-appraisal which involves the re-interpretation of the meaning of the stimulus. However, in states of equanimity, one does not modify or re-interpret the triggering stimulus. Rather, the transitory and temporal nature of the stimulus is recognized along with the insight that these are just thoughts/mental events and do not reflect reality. This further leads to reduced emotional processing and cognitive rumination and instead of reacting impulsively, the individual might choose to adaptively respond (Desbordes, et al., 2015).

Thus, equanimity may manifest as a reduction in the activation, intensity, and duration of maladaptive emotions and a faster return to baseline homeostasis (Desbordes et al., 2015). Another found that the non-reactivity and non-judging sub-scales of the Five Facet Mindfulness Questionnaire which correspond to facets of equanimity were associated with lower emotional lability and decreased emotional regulation difficulties (Hill & Updegraff, 2012).

Juneau et al. (2020) developed the Equanimity Scale (EQUA-S) which consisted of two sub-scales: even-minded state of mind (ESM) and hedonic independence (HI). It was found that the ESM sub-scale was significantly positively correlated with the emotional regulation strategies of acceptance and positive re-appraisal, while negative correlations were established with rumination and catastrophizing. The HI sub-scale refers to a state of mind which is not clinging or constantly wanting to prolong the experience of pleasure stimuli, it was found to be negatively correlated with reward sensitivity and impulsivity.

Hadash et al. (2016) proposed that equanimity is manifested by increased acceptance towards experience and reduced automatic reactivity to the experience (regardless of its hedonic tone). To test their model, acceptance was measured through four scales assessing experiential avoidance, thought suppression, acceptance, and distress tolerance. Automatic reactivity was assessed using

measures of anxiety sensitivity and cognitive reactivity to sad moods. In their model, the authors found one higher-order factor of equanimity and two lower-order factors of acceptance and reduced reactivity.

The psychological processes and manifestations of equanimity are elaborated in detail below.

1.4.1. Acceptance

As seen in the above study, acceptance is one of the key mechanisms of equanimity. Acceptance is defined as the willingness to see things as they are rather than how one thinks they should be (Kabat-Zinn, 1990). Other definitions of acceptance include being non-judgmental and "undefended exposure" towards experience without the utilization of defense mechanisms such as suppression, repression, or avoidance (Hayes et al., 2004). Thus, in states of acceptance, the capacity to withstand or tolerate distress may be enhanced. Acceptance training has also been found to lead to reduced thought suppression and enhanced distress tolerance (Tanay et al., 2012) and has been highlighted as a key driver of adaptive outcomes in mindfulness interventions (Baer et al., 2003; Lindsay and Creswell, 2017).

1.4.2. Experiential Avoidance

Closely linked to acceptance is the construct of experiential avoidance. The unwillingness to face unpleasant emotions, thoughts, and experiences and make efforts to avoid or escape them, is known as experiential avoidance (Hayes et al, 1996). Studies have shown that experiential avoidance is linked to both anxiety (Chawla & Ostafin, 2007; Fledderus et al., 2010) and depression (Cribb et al., 2006).

1.4.3. Cognitive Reactivity

Cognitive reactivity is another key mechanism related to equanimity. It is defined as the extent to which stress activates negative thinking and emotional patterns (Scher et al., 2005). A meta-analysis study reported that reduced cognitive and emotional reactivity is a key mechanism of the positive outcomes of mindfulness interventions (Gu et al., 2015). Mindfulness-based interventions also led to reduced task-interference from being exposed to unpleasant pictures (Ortner et al., 2007) and faster return to heart-rate baselines following an emotional stressor which may be explained by reduced automatic reactivity (Vago & Silbersweig, 2012).

1.4.4. Insight into True Nature of Phenomena

Another key factor related to equanimity is insight. Insight into the true nature of phenomena plays an important role in the cultivation of equanimity. Eberth et al. (2019) developed the PROMISE model through interviews with experienced meditators. Their model illustrates that equanimity and insight into phenomena are inter-connected and facilitate each other. From the qualitative interviews with the experienced meditators, various kinds of insights were described: insight into self-made suffering, insight into the subjectivity of own beliefs, insight into impermanence, and inter-connectedness of everything. The various types of insights described show the importance of the role of insight in cultivating equanimity.

1.4.5. Cognitive Decentering

Another key process related to equanimity is known as cognitive decentering. Cognitive decentering is defined as the process of observing one's thoughts and feelings as passing events in the mind rather than personally identifying with them as valid reflections of reality (Safran & Segal, 1990). This shift in perspective facilitates meta-awareness or insight towards one's habitual patterns of responding and enables a reduced identification with one's mental activity which further enhances perspective and mental clarity (Shapiro et al., 2006). In our Indian knowledge traditions, this concept has been referred to as *Sakshi-bhava,* or witness consciousness, and entails being a detached and non-judgmental witness to our thoughts or feelings (Chatwani, 2015). Decentering is also proposed to play a key role in mindfulness-based interventions in accounting for the reduction of symptoms and increase in well-being (Perason et al., 2015; Sauer & Baer, 2010). Conversely, an absence of decentering skills has been linked to increased rumination, sympathetic arousal (Williams, 2010), and increased depressive tendencies (Teasdale et al., 2002).

In summary, increased acceptance reduced cognitive reactivity, enhanced decentering skills, and insight into the true nature of phenomena are the key psychological processes linked to equanimity.

1.5 Distinguishing Equanimity from Passivity and Indifference

Lastly, it is significant to distinguish equanimity from seemingly similar states. Equanimity may often be misunderstood or assumed to imply detachment, passivity, indifference, apathy, or the

absence of emotional reactivity. In Buddhism, indifference is referred to as the "near enemy of equanimity" (Bodhi, 2000). Cultivating equanimity does not mean suppressing emotions or giving up on our life experiences. In states of equanimity, rather than the hedonic tone of experience, importance is paid to factors such as values, long-term goals, and pro-social intentions (Desbordes et al., 2015). Rather than being apathetic or indifferent, in states of equanimity, attention is not guided away from the triggering stimulus rather towards the stimulus with an attitude of acceptance and openness. Rather than detachment and cold indifference, in states of equanimity, one has reduced bias, prejudices, and preferences towards people. In Buddhism, equanimity also plays a key role in the cultivation of *Bodhicitta*, universal compassion for all beings. Thus, as seen above equanimity should not be misconstrued as indifference, detachment, or apathy.

In the next section, the theoretical distinction between equanimity and mindfulness will be elaborated.

1.6 Theoretical Distinctions between Equanimity and Mindfulness

In 1979, Jon Kabat-Zinn developed the Mindfulness-based Stress Reduction (MBSR) program at the University of Massachusetts Medical Center to help chronic pain patients deal with their pain. The eight-week MBSR program has its roots in Buddhism but was designed to be secular (Kabat-Zinn, 1982). Since then, the therapeutic and research interest in mindfulness has exponentially increased.

Many scales have been published to assess mindfulness and therapies such as Mindfulness-based Cognitive Therapy (MBCT) and Dialectical Behavior Therapy (DBT) have evolved. Research carried out in the last decade establishes how mindfulness has significant positive effects on depression (Hoffman et al, 2010; Segal et al., 2018), anxiety (Desrosiers et al., 2013; Ostafin et al., 2014) stress (Khoury et al., 2015), physical health (Creswell & Lindsay, 2014) and quality of intimate relationships (McGill et al., 2016; Mesmer-Magnus et al., 2017).

One of the most frequently cited definitions of mindfulness is by Kabat-Zinn (1990) i.e., to pay attention to the present moment in a non-judgmental way (Weber, 2017). Since Kabat-Zinn's definition, several facets of the construct of mindfulness have been identified, and various scales and theoretical structures have been proposed as delineated in Table 1 below.

Table 1

Psychological Definitions and Theoretical Frameworks of Mindfulness

Reference	Definitions & Theoretical Structure of Mindfulness
Kabat-Zinn (1990)	Paying attention to the present moment in a non-judgmental way
Bishop et al. (2004)	Self-regulation of attention on immediate experience with an attitude of openness and acceptance
Kentucky Inventory of Mindfulness Skills (Baer et al., 2004)	Four dimensions - Observing - Describing with awareness - Act with awareness - Accept without judgment
The Five Facet Mindfulness Questionnaire (Baer et al. 2006)	Five dimensions - Observing - Describing - Acting with awareness - Nonjudging of experience - Non-reactivity of inner experience
The Philadelphia Mindfulness Scale (Cardaciotto et al., 2008)	Two dimensions - Awareness - Acceptance
Cognitive & Affective Mindfulness Scale-Revised (CAMS-R) (Feldman et al., 2007)	12 items in a single dimension with four aspects of Attention, Present focus, Acceptance, and Awareness

It is important to note that the recent conceptualizations of mindfulness in the table above encompass two distinct elements: i) the development of awareness of the present moment and ii) how this awareness is applied to the present moment i.e., with an attitude of acceptance, openness and being non-judgmental.

These conceptualizations of mindfulness in the psychological literature shares commonalities but are not fully aligned with the traditional Buddhist definition of mindfulness. In Buddhism, the Pali

term for mindfulness is '*Sati*' which describes mindfulness as the state of mind that maintains attention on an object and that recollects without forgetfulness or distraction (Dreyfus, 2011). The traditional Buddhist understanding of mindfulness does not include an attitude of openness and acceptance. It is significant to note that the latter part of the Western conceptualization of mindfulness i.e., an attitude of openness and acceptance is more closely related to the understanding of equanimity in the Buddhist traditions (Weber, 2017).

Buddhist traditions clearly distinguish between mindfulness and equanimity. Mindfulness is emphasized as the ability to remain aware of what is happening in the field of experience while equanimity entails an attitude of openness and non-resistance towards this experience (Desbordes et al., 2015). Thus, mindfulness and equanimity each bear a different quality of mind upon experience. However, equanimity has been conflated under the broad term mindfulness in the Western definitions of mindfulness. This overlap of constructs under the umbrella term of mindfulness to some extent paints a distorted picture of the potential of mindfulness and neglects the construct of equanimity (Weber, 2017).

The cultivation of mindfulness may be seen as the foundation on which equanimity may gradually develop (Desbordes et al., 2015). Equanimity is thus linked with mindfulness, as one must be mindful of phenomena to relate the attitudinal concept of equanimity. Yet (Weber, 2017) suggests that equanimity is not dependent on mindfulness, in the sense as it can be applied as a general philosophy in life. The Shrimad Bhagavad Gita also encourages and emphasizes equanimity or Samatva as a philosophy of life.

An understanding of mindfulness and equanimity as distinct skills is important in the teaching-learning of contemplative practices. To illustrate, when a novice meditator becomes aware of traumatic thoughts, he/she may not yet have the skills of equanimity and may then resort to other maladaptive forms of emotional regulation such as suppression, repression, or avoidance (Desbordes et al., 2015).

To summarize, dissociating equanimity from mindfulness is a critical step in research for establishing more robustly the affective and neuro-cognitive mechanisms which facilitate adaptive outcomes. In the next section, the various self-report measures of equanimity are reviewed.

1.7 Self-report Measures of Equanimity

The few existing scales published are based on definitions of equanimity that share some similarities, but also contain some differences. Most of the scales published earlier lack a theoretical framework and a common agreement for the construct of equanimity. After the publication of seminal work on equanimity by Desbordes et al. (2015) and Hadash et al. (2016), most of the scales developed on equanimity follow a common underlying factor structure.

A scale was developed to measure the four immeasurables or brahma viharas: loving-kindness, compassion, sympathetic joy, and equanimity (Kraus & Sears, 2009). However, equanimity was only assessed by one item on acceptance, which does not measure equanimity in its entirety. In the Peace, Equanimity, and Acceptance in Cancer Experience (PEACE) scale, equanimity was not explicitly defined but items on the scale were related to acceptance of the diagnosis of cancer, a sense of peace, and having made peace with cancer (Mack et al., 2008).

Büssing, et al. (2007) developed a 40-item, Aspects of Spirituality (ASP) scale which consisted of seven factors of spirituality. One of the seven factors was equanimity, which comprised of three items (trying to practice equanimity, trying to achieve a calm spirit, and trying to meditate) which assessed the individual's efforts towards equanimity, rather than measuring equanimity directly. In the Resilience Scale, equanimity was conceptualized as one of the factors of resilience and defined it as a balanced perspective of one's life (Lundman, 2007). The Holistic Well Being Scale (Chan et al., 2014) aimed to assess equanimity in a eudemonic view of well-being, the Equanimity sub-scale consisted of four factors: non-attachment, mindful awareness, general vitality, and spiritual self-care.

More recently, the Mindfulness & Equanimity Inventory (Moscoso & Soto, 2017), is based on the definition proposed by Desbordes et al. (2015). The equanimity sub-scale of this inventory consists of 6 items such as I feel that I am a calm person, even in moments of stress and tension, Stress situations emotionally disturb me. Juneau et al. (2020) developed one of the most comprehensive scales on equanimity- Equanimity Scale (EQUA-S) based on Desbordes et al (2015) and Hadash et al. (2016) conceptualizations of equanimity. The EQUA-S is a 16-item scale consisting of two sub-scales: Even-mindedness and Hedonic Independence. These two sub-scales measure equanimity towards both the pleasant and unpleasant hedonic experience. The scale has good

convergent validity and its components are related to health outcomes such as impulsivity, substance use, and emotional regulation.

Weber and Lowe (2018) developed and validated the Equanimity Barriers Scale (EBS) which is a 15-item self-report scale that assesses barriers that individuals encounter in developing equanimity, rather than an individual's degree of equanimity. The scale consists of four sub-scales i.e., innate barriers, interactive barriers, reflective and social barriers that prevent an individual from cultivating equanimity. The most recently developed scale is the Equanimity Scale-16 which has two underlying factors of Experiential Acceptance and non-reactivity. The scale has good convergent and divergent validity, with significant correlations in the expected direction with the Nonattachment Scale, Depression Anxiety and Stress Scale, Satisfaction with Life Scale, and Distress Tolerance Scale (Rogers et al., 2021).

There are a few scales developed in the Indian context based on the conceptualization from the scriptures of the Bhagavad Gita which measure equanimity. The 18-item scale on Karma Yoga by Mulla and Krishnan (2007) consisted of three sub-scales of six items each for duty-orientation, indifference to rewards, and equanimity. The items on the subscale of equanimity mainly measured being neutral towards polarities such as success and failure. Mishra (2018) developed a scale on Samatva for his doctorate research. The 32-item scale on Samatva consisted of three subscales i) Established in Yoga ii) Complete Non- Attachment and iii) Even Mindedness.

In summary, the various existing scales on equanimity have been developed in the context of resilience, acceptance, karma yoga, and Buddhist definitions. In the next section, the processes of equanimity implicit in various psycho-therapies such as psycho-analysis and Cognitive therapy are discussed.

1.8 Psycho-therapeutic Approaches to Equanimity

Even though the notion of equanimity may not be openly addressed or discussed with clients in psychotherapy, it is a crucial, implicit idea in the majority of therapeutic treatments. To illustrate, in the psycho-analytical technique of Free Association, the clients are asked to report anything that comes to mind without censoring (Freud, 1966). The basis of this technique is that all emotions should be held in awareness with an attitude of acceptance and openness, and to minimize the use of defense mechanisms such as repression or suppression. Psychoanalysis did not encourage

equanimity directly through contemplative practices. However, the notion to look at all emotions with an attitude of openness and non-judgment is implicitly related to the cultivation of equanimity (Desbordes et al., 2015).

In the more recently developed therapies such as Acceptance and Commitment Therapy (ACT), Dialectical Behavioral Therapy (DBT), and Mindfulness-based Cognitive Therapy (MBCT) equanimity is still not explicitly specified but is implicitly implied in the form of a certain set of attitudes on how one can relate to various experience with an attitude of non-judgment, acceptance, non-avoidance and non-reactivity (Desbordes et al., 2015).

The recently developed Cognitively-Based Compassion Training (CBCT) at Emory University also implicitly promotes the development of equanimity. CBCT is a type of contemplative training that teaches contemplation of loving-kindness, empathy, and compassion towards others (Ozawa & Dodson-Lavelle, 2011). CBCT, which builds on basic mindfulness practice, incorporates several generative activities with the long-term objective of developing equanimity that encourages acceptance and an understanding of others (Salzberg, 2002). CBCT encourages equanimity towards all beings and also emphasizes the concept of inter-dependence. One of the tasks used to demonstrate the notion of equanimity towards individuals in a comprehensible manner includes the instructor laying an eight-foot tape with “Full empathy” written on one end of the tape and “No empathy” on the other end. The participants are then presented with a hypothetical circumstance involving a friend or a stranger and asked to identify their emotions towards people on these categories such as friend/stranger etc. In another exercise, to help participants grasp the notion of inter-dependence, they are encouraged to list and consider all of the resources and people needed to manufacture one sweater, including animals, farmers, tailors, and shopkeepers, and note how they all are connected to the making of one single sweater. These kinds of activities give realistic examples of equanimity and inter-dependence in daily life (Reddy et al., 2013).

In summary, although equanimity may not be explicitly addressed or discussed with clients in psychotherapy, it is a critical, implicit concept in the vast majority of therapeutic procedures. In the next section, we will review the role of equanimity in intervention studies.

1.9 Equanimity as an Outcome of Contemplative Practices

Equanimity is becoming the subject of increasing research interest as a general outcome of contemplative practices (Weber, 2021). A few researchers have studied equanimity as an outcome variable in mindfulness practice as described below.

In one of the pioneering papers in which Hadash et al (2016) theorized that the practice of mindfulness leads to the cultivation of equanimity. This study focused on the measurement of equanimity towards unpleasant hedonic tone only. Meditation novices (N = 138) from the general community were randomized to a four-session mindfulness training condition or control condition. It was found that relative to the control condition, mindfulness training led to reductions in reactivity to unpleasant hedonic tone over time. However, training did not lead to the expected increase in the attitude of acceptance. These preliminary results provided evidence and support to studying equanimity as an outcome in mindfulness research.

A study by Shoham et al (2018) involved 82 meditation novices who participated in a six-session mindfulness training intervention. Throughout the intervention, 52 digital experience samples were collected. Results showed that the cultivation of mindfulness states was associated with an increase in manifestations of equanimity (i.e., elevated acceptance and decreased hedonic-based avoidance), which were also robust to experimentally evoked negative thoughts, which provide support to equanimity as an outcome variable in mindfulness research.

Juneau et al. (2020) explored the relationship between the practice of mindfulness and equanimity in two separate studies. The results of the first correlational study indicated that the more experience participants had in the practice of mindfulness, the higher their equanimity scores, thus demonstrating that trait equanimity appears to be linked with mindfulness practices. A second study investigated the effect of mindfulness meditation practices on state equanimity. The participants were randomly assigned to one of three experimental conditions: body scan meditation, breathing meditation, and control. The even-minded state of mind component of the equanimity scale increased for novices after a 30-minute body scan compared to breathing meditation and control. However, short mindfulness exercises for novices did not result in higher Hedonic Independence sub-scale scores on the equanimity scale. This suggests that high levels of desire towards pleasant objects or situations may require more meditation practice.

In a study it was found that mindfulness meditation helped practitioners become more tolerant of dysphoric emotions by enabling them to cultivate de-centering skills. Results of the study over a year suggested that the participants through the cultivation of mindfulness meditation developed de-centering skills, which led to enhanced equanimity in the presence of a negative stimulus (Lomas et al., 2015).

Qualitative studies have also been carried out to report on the subjective experiences of advanced practitioners of Mindfulness and Vipassana meditation. Phenomenological studies on the lived experiences of meditators have reported equanimity as an outcome of intensive meditation practice. In another study, experienced Vipassana meditators reported increased equanimity after meditation practice which was reported to be manifested as calmness, reduced negative emotions, and being in the present by (Pagis, 2015).

In another study, experienced mindfulness meditators explained how they perceived the process and the outcomes of their meditation experience. Major themes reported were changes in perspective-taking and, an increase in equanimity in the context of devaluation of emotions, i.e., the emotional stimuli were perceived as more neutral instead of positive or negative (Machada & Costa, 2015).

In a qualitative study, Nickerson and Hinton (2011) interviewed six Cambodian monks residing in the United States about the anger management strategies which they provided to their Cambodian community refugee members. The monks emphasized three important Buddhist teachings which they utilized to aid in the anger management of the Cambodian refugees: The Four Noble Truths, the awareness of the nature of anger, and equanimity. The monks referred to equanimity as a state of observation and detachment from one's emotions and thoughts and as staying on the middle path by balancing the extreme emotions. The monks also elaborated on the importance of the regular practice of equanimity as a brahma vihara meditation which would facilitate the reduction of anger.

A recent study highlights acceptance training as a critical driver in the therapeutic efficacy of mindfulness interventions. In this experimental study, participants were randomly assigned to complete any one of the three interventions: (1) training in both monitoring and acceptance skills,

(2) training in monitoring only, or (3) active control training. The Monitoring and Acceptance training group learned how to (1) monitor their present-moment experience and accept each experience (referred to as equanimity) whereas the Monitor Only group learned just how to monitor their present experience. After the intervention, cortisol, blood pressure, and stress reactivity were assessed. The results indicated that the Monitoring and Acceptance group had reduced cortisol and stress reactivity compared to Monitor Only and control group. This pioneering study highlights acceptance training (a facet of equanimity) as a critical mechanism in the therapeutic outcomes of mindfulness research (Lindsay et al., 2018).

Based on the same study as described above, the authors have published another paper in which they reported that participants who had monitoring and acceptance (Monitor + Accept) training experienced a greater reduction in loneliness relative to the other two conditions. Monitor + Acceptance training reduced daily-life loneliness by 22% and increased social contact by more interactions each day compared with the Monitor Only group and control group. These findings describe acceptance-skills (equanimity) training may reduce perceived loneliness and increase social engagement (Lindsay et al., 2019).

In summary, most of the studies on equanimity in the psychological literature have studied equanimity as an outcome of or in the context of mindfulness-based interventions. The following section discusses compassion and its linkages with equanimity.

1.10 Equanimity and Compassion

Compassion is an emotion that is a sense of shared suffering, an ability and willingness to enter into another's situation to understand their pain, accompanied with the desire to reduce the suffering of another (Fernando & Consedine, 2014; Jimenez, 2009). Paul Ekman, the eminent researcher on emotions further suggests four key dimensions of compassion: (i) empathic compassion (understanding the suffering of others) (ii) action compassion (taking actions to remove the suffering of others) (iii) concerned compassion (motivation for helping) and (iv) aspirational compassion linked to a desire to develop compassion (Ekman, n.d.).

In the Buddhist doctrine, compassion and equanimity are inter-linked, they both are essential parts of the four brahma viharas or divine abodes of the mind. Illustrating the significance of equanimity in cultivating compassion, Kamalashila, a scholar of the ninth century, draws an analogy to

cultivating crops. Just as a farmer evens or levels the soil before planting the crops, the first step is to make the mind an even field through the cultivation of equanimity. One should now moisten and make the land fertile with loving-kindness. In this fertile mind, the seeds of compassion are planted, from which may emerge universal compassion or *Bodhicitta* (Lama & Vreeland, 2008).

In the psychological literature, equanimity is posited as the key mediating factor in being non-judgmental and therefore facilitates compassion. To be compassionate, an awareness that is beyond the self and inclusive of others is required (Weber, 2017). It is further postulated that the cultivation of equanimity reduces the strong likes/dislikes towards others. This defuses the strong distinction between self and others, thereby facilitating the development of compassion (Wang, 2005).

The cultivation of equanimity also enables compassion to deal with intense pain and suffering. Without equanimity, compassion may diminish due to a lack of a stabilizing factor (Thera, 2008). Thus, when faced with a situation, regardless of pleasant, unpleasant, or neutral one is best able to cultivate compassion with the stabilizing factor of equanimity (Weber, 2021).

In an intervention study, Reddy et al. (2013) studied the effects of Cognitively-Based Compassion Training (CBCT) on adolescents living in foster care. The paper highlights the role of equanimity in CBCT especially in the context of a vulnerable population. The authors caution that clients or children who have faced abuse, trauma and have difficulties establishing inter-personal boundaries, could misunderstand equanimity as becoming less attached or more distant towards others. To minimize this risk, CBCT emphasizes mindfulness of one's own emotions and thoughts before introducing the term equanimity.

Few studies have explained the relation between self-compassion and equanimity. Self-compassion is considered as a requirement for the cultivation of the brahma viharas (loving-kindness, compassion, empathic joy, and equanimity) towards oneself and others (Goldstein & Knorfield, 2001). Once the individual develops self-compassion, he comes to an understanding of his suffering and the natural desire to alleviate it. This understanding is then extended towards others and he realizes that suffering is a universal experience, which further leads to the desire to alleviate other people's experience of suffering. This process is facilitated by equanimity.

Equanimity allows one to be present with one's suffering, with neither avoidance nor identification, which further allows the individual to be more open and accepting towards others' experience of suffering (Jinpa et al., 2009). Strengthening the connection between self-compassion and equanimity, a study reports that self-compassionate individuals do not avoid or escape from negative experiences, but face them with openness, tolerance, and equanimity (Trompetter et al., 2017).

Rodriguez-Carvajal et al. (2016) tested the link between self-compassion and cultivation of the *brahma viharas* (equanimity, loving-kindness, and sympathetic joy). In their study, equanimity is referred to as an open attitude of acceptance without impulsive reaction to one's experience. The findings reported a sequentially ordered relationship indicating that the practice of mindfulness meditation increases mindfulness traits which further enhances self-compassion. Self-compassion then leads to the development of positive states of mind (equanimity, loving-kindness, and sympathetic joy) towards oneself and others.

In summary, compassion and equanimity share important associations. Equanimity may be a key mediating factor that enables the development of compassion for oneself and others. In the next section, the various barriers and challenges faced in the cultivation of equanimity will be discussed.

1.11 Challenges in the Cultivation of Equanimity

The cultivation of equanimity is a process that takes effort, time, and regular practice. The challenges related to the cultivation of equanimity are reported in the psychological literature, which includes experiencing resistance as practice progressed (Machado & Costa, 2015) and experiencing physical pain during extended periods of sitting for meditation (Ekici et al., 2018). According to Pagis (2015), a research-based interview of participants in Vipassana meditation retreats, the experience of change was most profound for the vast majority of respondents following their first meditation course. This transition, however, was regarded as transient, with respondents saying that the major reason they returned to meditation retreats was the gradual reduction of equanimity and the return of disturbing thoughts and emotions.

In another study, Weber (2017) proposes four types of judgments that may act as barriers that prohibit the practice of mindfulness, equanimity, and compassion. As shown in Figure 5 below, the innate level of judgment refers to genetically pre-determined basic feelings of like, dislike, and

neutrality which interacts with social judgments. Social judgments may be of two kinds: external and internal social judgments. External social judgments refer to institutions or agencies such as culture, society, media that can give rise to conscious or unconscious judgments towards the phenomenon. Whereas internal social judgments refer to the aspect of the inner self that seeks approval and acceptance from others or the desire to fit in. A combination of innate and social judgments is known as interactive judgments and these are further enhanced by factors such as memory, stress, and emotion. In reflective judgments, the individual assigns meaning to experiences such as good, bad, or neutral. Thus, the judgment cycle illustrated in Figure 5 below highlights the potential layers of judgments upon us which can act as barriers towards mindfulness, equanimity, and compassion.

Figure 5

Cycle of Judgement

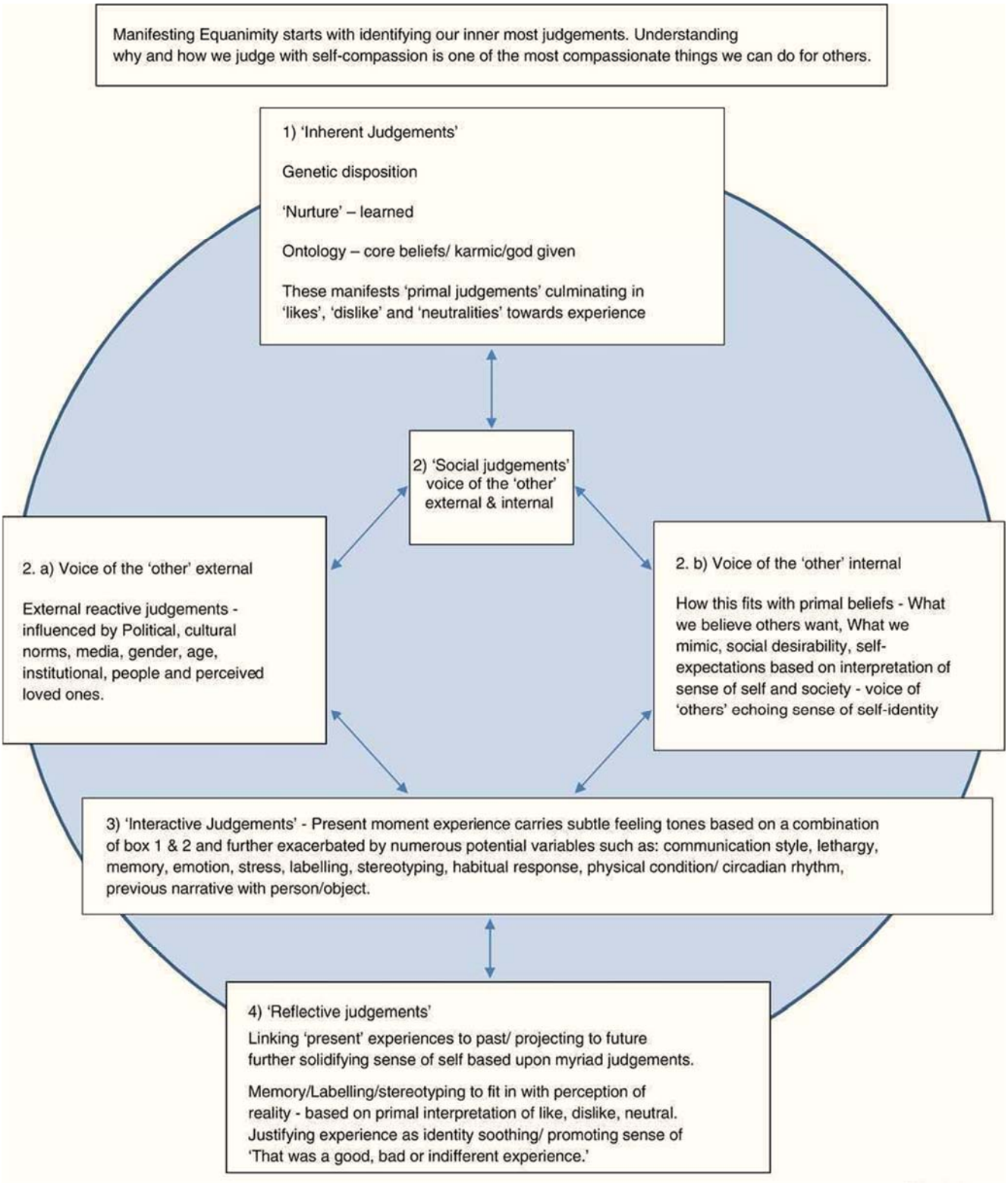


Fig Cycle of Judgement from J. Weber (2017). Mindfulness is not enough: Why equanimity holds the key to compassion. *Mindfulness & Compassion*, *2*(2), 149-158.

In addition to the aforementioned model, Weber (2017) developed the Cycle of Ignorance, which emphasizes the inter-relationship between judgment and ignorance. According to this model, basic ignorance arises spontaneously when we accept or reject something based on our primitive feelings. External social ignorance occurs when a person accepts what society and the media tell them without introspection. Similarly, internal social ignorance occurs when one believes one's thoughts and feelings without reflection. This may lead us to the present moment experience and in the reflective ignorance, experience is categorized as good, bad, or neutral. These models described above illustrate the interplay between judgment and equanimity and emphasize the fact that these judgments must be addressed to accept things non-judgmentally and foster equanimity.

In summary, the various challenges to the cultivation of equanimity identified in the psychological literature include mental resistance, physical pain due to sitting in one posture, the return of negative thoughts and emotions, and the various types of internal and social judgments which may act as barriers to the cultivation of equanimity. In the next section, the key psycho-social variables of the study and their relation to equanimity are discussed.

1.12. Equanimity and its Psycho-social Health Concomitants

Emotional reactivity, neuroticism, loneliness, social media addiction, well-being and general health were selected as the psycho-social health concomitants of the study based on the review of the few studies which are available in the literature.

In the review below, relevant studies have been cited on the relation between equanimity and the psycho-social health variables. In a few instances, where the studies between equanimity and these variables were not available, the researcher has cited studies between the broader term mindfulness which include an element of equanimity.

1.12.1 Well-being

Equanimity has been proposed as a significant contributor to the enhancement of well-being (Desbordes et al., 2015). In another study, the Equanimity Scale-16 developed by Rogers et al. (2021) was found to be correlated with the Satisfaction with Life Scale (.34).

Well-being has been broadly classified under two traditions- the hedonic tradition and the eudemonic tradition (Ryan and Deci, 2001). The hedonic tradition focuses on pleasure, enjoyment, and satisfaction with life. The hedonic tradition represents a focus on the self and one's needs and desires (Huta, 2016). On the other hand, eudemonic well-being focuses on optimal functioning, meaning in life, authenticity, and the realization of one's potentials (Huta & Waterman, 2014). Recent trends in psychology, have focused on well-being with a trans-personal approach which includes going beyond the self and has highlighted the role of compassion and loving-kindness in well-being (Fredrickson et al., 2008; Zessin et al., 2015).

It is also suggested that equanimity is the ideal state of well-being in which there is happiness despite an absence of pleasure. Furthermore, it is a state in which a person is conscious of his or her own as well as others' needs and remains calm amid any hardships and challenges (Bokenkamp, 2005).

Well-being in this research has been studied in terms of emotional well-being, psychological well-being, and social well-being. Emotional well-being falls under the hedonic tradition and can be enhanced by maximizing pleasant feelings while minimizing unpleasant feelings (Diener et al. 1999). Psychological well-being and social well-being fall under the umbrella of eudemonic well-being. Ryff (1989) proposed the concept of psychological well-being as a multidimensional construct that consists of six distinct facets: (a) self-acceptance (b) positive relationships with others (c) autonomy (d) environmental mastery (e) purpose in life and (f) feeling of personal growth.

A model of social well-being was proposed by Keyes (1998) that focuses on individuals' evaluations to indicate to what extent they are functioning well in their social world and consists of five facets of (a) social integration - the quality of one's relationship to society (b) social acceptance - having positive attitudes and being accepting of human differences (c) social contribution - the belief that one has something of value to contribute to society (d) social actualization - the evaluation of the fulfillment of the potential of society and (e) social coherence finding the society around meaningful. Thus, as seen from the above models of well-being, emotional well-being focuses on the experience of pleasure; whereas from a eudemonic

perspective, well-being is achieved by fulfilling needs that are conducive to human growth and potential (McMahan & Estes, 2011).

The Holistic Wellbeing Scale (Chan et al., 2014) is based on the understanding that well-being consists of two goals of removing suffering and achieving enduring happiness. The scale consists of two sub-scales of equanimity and affliction. In this scale, equanimity consisted of four factors: non-attachment, mindful awareness, general vitality, and spiritual self-care. The scale was found to have satisfactory reliability and convergent validity with measures of hope, mindfulness, and quality of life.

1.12.2. Emotional Reactivity

Emotions are multilayered phenomena, involving variations across three pathways: physiology (sweating, increased heart rate), subjective experience (feeling fear, anxiety), and behavior such as the fight/flight response (Becerra et al., 2017). An emotional response consists of three key elements: activation, intensity, and duration. Activation refers to the threshold and ease with which an emotional response is triggered, that is, how quickly the emotional arousal levels rise. The intensity of an emotional response refers to that is, how much the emotional arousal rises, i.e., the peak amplitude of arousal reached. The duration of an emotional response refers to the amount of time required for emotional arousal levels to return to baseline. These three key aspects of the emotional response are referred to as emotional reactivity (Becerra & Campitelli, 2013).

Emotional reactivity is a complex phenomenon. There may be individual differences in the activation, intensity, and duration of emotional reactivity. Individual differences may also be found in the magnitude of the emotional stimulus that is required to trigger an emotional response. In addition, individuals may present different patterns of emotional reactivity to emotions with positive valence compared to emotions with negative valence (Davidson, 1998).

Emotional reactivity appears to be linked to the ability to regulate emotions and is one of the initial and significant aspects of the emotional experience. There is a close relationship between emotional reactivity and emotional regulation, the more intense, longer emotional reactions are likely to be harder to regulate (Gross, 2014). Dysfunctional levels of emotional reactivity have been implicated in the development and maintenance of depression (Bylsma et al., 2008), bipolar

disorder (Gruber et al., 2011), anxiety disorders (Goldin et al., 2009), and borderline personality disorder (Kuo & Linelan, 2009).

A low reactivity for positive emotions has been implicated in depressive disorders in the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 2013). A differing pattern has been found in manic patients with bipolar disorder. Manic patients displayed elevated reactivity to positive stimuli while levels of negative reactivity were normal (Gruber et al., 2011). In Borderline Personality Disorder there is the presence of negative emotional responses which are easily activated, intense in their degree, and last longer in their duration (Linehan, 1993; Rosenthal et al., 2008), however, there is no increase in reactivity for positive emotions (Levine et al., 1997).
The variable of neuroticism is described further below.

1.12.3. Neuroticism

Neuroticism is recognized as one of the reliably identified and fundamental traits of personality. It is a trait featured in the two most prominent models of personality, the Big Five model composed of Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness (McCrae & Costa, 1987), and the Big Three model, composed of Neuroticism, Extraversion, and Psychoticism (Eysenck & Eysenck, 1985).

Neuroticism refers to a disposition to experience negative emotional states. Individuals who score high on the trait of neuroticism are more likely to experience feelings such as anxiety, anger, and depression. Individuals high on neuroticism are more likely to interpret neutral stimuli as threatening, have low frustration tolerance and respond poorly to stressors. They may have trouble regulating their emotions and controlling their impulses when feeling upset (Widiger, 2009).

Specifically, neuroticism has been linked to an avoidance motivational system (Carver et al., 2000). In avoidance motivation, behavior is motivated by a negative or undesirable event whereas, in approach motivation, behavior is directed by a positive or desirable event (Elliot, 1999). Thus, avoidance motivation in neuroticism reflects the stable tendencies to avoid harm, threats, and penalties (Tamir, 2005). According to Elliot and Thrash (2002), neuroticism is comprised of an avoidance temperament, which is defined as a biological sensitivity and heightened attention

towards undesired stimuli (actual or imagined), as well as a behavioral inclination to avoid such stimuli.

Few studies have linked the relationship between equanimity and neuroticism. The Equanimity scale by Juneau et al (2020) was found to be significantly negatively correlated with the neuroticism dimension of the Big five inventory (even-mindedness sub-scale -.73 and hedonic independence scale -0.18). In another study by Weber (2017), the neuroticism scale of the Big Five Inventory correlated significantly with the social and reflective subscales of the Barriers to Equanimity Scale. This would suggest that the higher the neuroticism the more perceived social and reflective judgments are barriers to equanimity. The variable of loneliness is described further below.

1.12.4. Loneliness

There are various definitions of loneliness in the literature which are reviewed below. Loneliness is defined as the difference between desired and actual social contact (Neto, 1992). Other definitions also propose loneliness as the quantitative or qualitative lack of social relationships where the intimacy one longs for is unfulfilled (De Jong-Gierveld, 1987). Another study reported three important facets of loneliness- feelings of deprivation, sadness, and hopelessness regarding the improvement of the situation (Perlman & Peplau, 1982). On a similar note, four major elements of the experience of loneliness were suggested by Rokach (1988): self-alienation, interpersonal isolation, distressing reactions, and agony.

From an evolutionary perspective, being socially isolated meant reduced chances of survival, hence feelings of loneliness evolved to encourage and drive socially connected behaviors to ensure survival (Cacioppo & Cacioppo, 2018). A cognitive understanding of the etiology of loneliness indicated that various negative cognitive biases underlie the social information processing in individuals who experience loneliness. These negative biases are in the form of an increased vigilance for socially threatening stimuli, hostile attributions, expectations of rejection, negative evaluations of self, and low self-efficacy (Spithoven et al., 2017).

The risk factors for experiencing loneliness include living alone, old age, widowhood, divorce, separation, and living with a chronic illness. In addition, factors such as poor social skills, low

self-efficacy, and feelings of rejection also put the individual at higher risk for experiencing loneliness (De Jong-Gierveld, 1998). Loneliness also has many negative consequences for both mental and physical health. It is negatively related to self-esteem (Dhal et al., 2007; Vanhalst et al., 2013) and positively related to depression (Erzen & Çikrikci, 2018), anxiety (Caplan, 2006), and alcoholism (Loos, 2002). Finally, significant relationships have been reported between loneliness and health problems, such as increases in blood pressure and poorer sleep quality (Cacioppo et al., 2002) and psychosomatic concerns (Jackson & Cochran,1991).

Interventions that teach mindfulness skills with an acceptance or equanimity focus have shown potential in reducing feelings of loneliness. A study demonstrated the efficacy of a two-week smartphone-based mindfulness training for reducing loneliness and increasing social contact. Participants in their study were divided into three groups. Group one had training in monitoring and acceptance skills, group two had only monitoring training and the third group was the control group. Results indicated that monitoring and acceptance training reduced daily-life loneliness by 22% and increased social contact by two more interactions each day compared with both Monitor Only and control training. These findings suggest that cultivating an acceptance orientation (equanimity) toward present-moment experiences is a significant mechanism for reducing perceived feelings of loneliness (Lindsay et al., 2019). The variable of social media addiction is described further below.

1.12.5 Social Media Addiction

Human beings have the fundamental need to belong, be heard, validated, and communicate (Wang, 2013). In recent decades, with the development of information technology and the proliferation of the internet, the ways of inter-personal communication have considerably evolved (Stone & Wang, 2018). The free social media platforms with easy access and high-speed internet bring about the potential for social media addiction (Griffiths, 2012). The number of social media platforms has exponentially increased over the last few years to include Facebook, WhatsApp, Instagram, TikTok, Telegram, WeChat, Twitter, and Snapchat.

Social media addiction can be viewed as one form of Internet addiction, where individuals who exhibit compulsive behavior to use social media (Starcevic, 2013), are often driven by an uncontrollable urge to log on (Andreassen & Pallesen, 2014) and may develop withdrawal

symptoms when unable to access (Leung, 2014). Thus, similar to other known addictions, such as alcohol, smoking, gambling, social media addictions include symptoms such as increased tolerance, mood modification, withdrawal, and relapse (Ahmed & Vaghefi, 2021).

The risk factors for developing social media addiction are outlined below. Studies have found that individuals with traits of extraversion, openness to experience (Ho et al., 2017), and narcissism (Choi et al., 2018) are at higher risk for developing problematic use of social media. The presence of anxiety and depressive symptoms also increases the risk of developing social media addiction (Andreassen et al., 2016). The cognitive factors underlying social media addiction include a need for gratification and a need for escapism. Foroughi, et al. (2019) found that individuals who due to low self-esteem used social media to gain appreciation or instant validation from others, were at higher risk to develop an addiction. Escapism can broadly be defined as the need to get away or escape from the real world, individuals with negative thoughts about their situations or environment may often turn to social media as a means of escapism or avoidance (Masur et al., 2014). Several studies have also found a link between social media addiction and increased reward sensitivity. (He et al., 2017; Lyvers et al., 2016). Reward sensitivity is defined as a component of personality which is the tendency to detect, follow, and derive pleasure from pleasurable stimuli (Bornsetin, 2018).

The consequences of social media addiction are delineated below. Many studies have indicated that the prolonged use of social media can manifest in interpersonal problems (Balakrishnan & Shamim, 2013), depressive symptoms (Lin et al., 2016; Pantic et al., 2012), reduced academic and work performance (Junco, 2012; Wood et al., 2011) lowered self-esteem (Malik & Khan, 2015) and reduced well-being (Błachnio et al., 2016; Hawi & Samaha, 2017; Uysal et al., 2013).

In a study by Juneau et al. (2020), it was found that equanimity is negatively correlated with the Addictive Intensity Evaluation Questionnaire which assesses eating addictions, and also with sensitivity to reward questionnaire which is a core component of addictive behaviors as described above.

1.12.6. Perceived General Health

A number of studies have documented the effects of mindfulness-based interventions which may include elements of equanimity on health parameters. Research has shown that mindfulness-based interventions have an impact on various health parameters such as pain (Mohammed et al., 2018),

and health related quality of life (Nathan et al., 2017) and may be a beneficial intervention for reducing stress, cortisol levels, and symptoms in diseases such as cancer (Lengacher et al., 2012). A study reported that mindfulness-based therapy had a significant positive effect on general health and somatization in individuals dealing with addictive behaviours (Kazemian, 2014).

A study by Davidson et al. (2003) which documented the effects of an eight-week training program in mindfulness meditation reported significant increases in left-sided anterior activation, a pattern associated with positive affect, in the meditators compared with the nonmeditators. The authors also found significant increases in antibodies among subjects in the meditation compared with those in the wait-list control group. In summary, the research reports positive effects of mindfulness-based interventions on mental and physical health parameters.

The research gaps found in the psychological literature will be outlined in the next chapter, along with the aims and objectives of the research.