Relationship Between Performance Anxiety and Self-Differentiation

by

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Submitted in Partial Fulfillment of the Requirements for the Degree of

Doctor of Philosophy in Marriage and Family Therapy

at

Mount Mercy University

Cedar Rapids, IA

May 2022



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Abstract

Will a brief psychoeducational introduction to the processes and meaning of "selfdifferentiation" within the context of a small group of students be sufficient to produce an increase in self-differentiation and a corresponding reduction in anxiety related to academic performance? At an urban health sciences university from a pool of 37 undergraduate radiologic technology students, 14 students were recruited with diverse academic and socioeconomic backgrounds between the ages of 18 and 51 years (M=27.36). 12 of the 14 students completed the study with seven assigned to the test-group, and seven assigned to the control-group. Two control-group participants left the study prior to completion due to withdrawal from the radiologic technology program. Each participant self-ranked their own responses in areas targetting emotional cutoff, fusion, emotional reactivity, and I-position through the DSI-R survey (Skowron & Schmitt, 2003) at the beginning, and end of the term. The test-group participants attended a five hour workshop in which they received instruction on the process and meaning of self-differentiation. Findings of the pilot study suggest that participation in a brief psychoeducational introduction to the processes and meaning of self-differentiation may positively impact student retention. The study also demonstrated a positive correlation with Iposition for the test-group (p=0.04), and negative correlation for the control-group (p=0.03). The research did not show significant results to indicate improved academic performance as measured through grade differential between groups within the timeframe of this brief study.

Acknowledgements

I am grateful for the kindness extended by Mount Mercy University (MMU), the Doctor of Philosophy in Marriage and Family Therapy Program at MMU, and especially the MMU directors, faculty, and adjuncts who provided excellent guidance, instruction, and advocacy in making the degree completion possible. You are all wonderful, and have my gratitude.

I share my gratefulness toward my sons, Robert and Roman. Without you, Robert, and you, Roman, I would be far less inspired and nowhere near as fulfilled. Thank you both for being who you are. You are loved and appreciated.

Thank you to Michel Cramer Bornemann in helping me gain greater understanding of the many forms that love may take. Yet again life has shown, with an open heart, that all is possible.

Many thanks to my closest friends who have stood by me as life presents itself truthfully in its many guises of beauty, sadness, love, fear, freedom, anger, fun, and abundance: Lisa McGrath, Shannon Fletcher, Kathy Griesser, Heather Schepman, Jennifer Rems, Vicky Entinger, Nykol Eystad, and Ducky. Thank you also Blaze Lanoue for your statistically significant help!

Thank you very much Dr. Billie E. Forisha. You are a hero, almost mythical, perhaps with a Jungian-archetypal Beowulf façade.

Deo gratias!

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Chapter One: Introduction

Background

The concept of "self-differentiation" (Bowen, 1994) is the central concept of Natural Systems Theory, one of several schools of thought within the discipline of Marriage and Family Therapy. The concept refers to the lifelong process of maintaining a balance between two overlapping human processes: 1) being an individual and being a member of a group, and 2) between cognitive functioning and emotional functioning. Furthermore the theory posits that the challenge to maintaining a balance between these processes is itself determined by how much anxiety is experienced by a person and how well it is managed. Natural Systems Theory postulates that increasing an understanding of the above processes related to one's own individual and familial development will decrease the experience of anxiety as well as its debilitating consequences.

Differentiation of self (DoS) may be applied as a useful tool in conjunction with Natural Systems Theory to increase the understanding of how a person effectually relates to themselves as an autonomous person and as part of a group, as well as how cognitive and emotional aspects of experiences impact interpersonal and intrapersonal exchanges. The application of DoS has been predominantly used to offer insight in couple dyadic and family relationships (e.g.: Dolzdel-Castellar & Oliver, 2021; Handley et al., 2019; Lampis et al., 2019; Priest, 2019; Titelman, 1998, etc.). Through early investigations of DoS, Skowron and Friedlander (1998) developed a differentiation of self inventory with modifications presented by Skowron and Schmitt (2003) that has proven useful in establishing baselines of understanding within the contexts of fusion, emotional cutoff, emotional reactivity, and sense of self labelled as "I-position" (e.g.: Peleg et

al., 2018). Aspects of cognitive and emotional influence on self have been developed, described, and borrowed from diverse sources.

Foundational work to better understand the emotional and rational self introspectively and in relation to family dynamics has been varied in approach with roots in communication theory (e.g.: Haley, 1986), transactional analysis (e.g.: Berne, 1964; Steiner, 1974), existentialism (e.g.: Becker, 1975; Camus, 1989), metaphysics (e.g.: James, 1908), mythology (e.g.: Campbell & Moyers, 1988; Jung, 1964;), cybernetics (e.g.: Wiener, 1961), mindfulness (e.g.: Satir, 1976), Milan-experiential (e.g.: Boscolo et al., 1987), Gestalt-experiential (e.g.: Perls et al., 1994), sociological (e.g.: Bateson, 1972), humanistic theory (e.g.: Rogers, 2015), and paradoxical (e.g.: Laing, 1990) to offer a small representation of influential contributions.

Through the mutual influence of variable approaches, theories, and knowledge, the Natural Systems Theory offers a dynamic, resilient, and highly adaptable paradigm for increasing awareness, wellbeing, and functioning for the individual and the family intentionally committed to explore the opportunities therewithin.

Exploration of self as an individual and as a member of a family may help improve a sense of self, while reducing the emotional pain experienced (Kerr & Bowen, 1988; Skowron & Schmitt, 2003). The increase of intrapersonal and interpersonal understanding may further benefit the family unit with greater intentional focus on promotion of group wellbeing.

McGoldrick et al. (2008) offered additional insight to the exploration of group family dynamics with the advancement of genograms in Marriage and Family Therapy practice. Investigating meaning of self and family dynamics may be clarified through the revelation of generational patterns that permeate and dominate long-term wellbeing. The wellbeing within family life is dependent on more than just separate healthy individuals acting as autonomous units. Family

wellbeing is influenced by the environment in which the members interact, interplay of exchanges, as well as when and where in the family individuals join the family.

Positional birth order may influence the expectations, resources, and available responses a person has access to in day to day life. Alfred Adler's (1956) work on individual psychology, self-worth, and familial endogenous effects gave way to a fresh approach that moved away from Freud's (1923) focus on the expression of drives. The concepts of birth order have been described and expanded through the work of Dreikurs (1989), and Dreikurs and Soltz (1990) to increase the reach and impact that the knowledge of family birth order holds. Together the use of family birth order and genograms provide empirically proven resources that lend themselves in development of therapeutic insights toward self-discovery, differentiation, identification of family patterns, and intentional changes for promotion of familial wellness.

Change may be utilized as an important tactic in Natural Systems Theory to identify the scope and objective of efforts put forth. According to Watzlawick, Weakland, and Fisch (2011), change may be described as first-order or second-order. First-order change best describes surface level change that maintains the homeostasis of the original system with minimal disruption.

Second-order change overturns the system to *change the change* itself in a significant way that creates a new standard of homeostatic normalcy. To achieve second-order change requires a holistic change that will refute the plausibility of worn-in patterns and override the mechanisms that shape family cycles to create a new pattern. The process to instigate a new pattern has a high probability of a temporary drop off in outputs with an increase in negative response cycles, followed by a steady climb toward more desirable familial cycles of wellbeing. Kerr and Bowen (1988) explained that change in multigenerational patterns of differentiation tends to be slow, and can move in either direction by approximately 10 points per generation.

The standard ebb and flow of homeostasis is disrupted in second-order change, leaving a wake of disturbances that may be used to restructure a new, desired paradigm.

The patterns and cycles of emotional response and cognitive problem solving put forth by an individual and family may be recognized through the predictable cause and effect of discourse described by Wiener (1961) in his early work on cybernetics. The probability of responses and courses of events follows a predictable pattern of give and take based on the inputs that determine the outputs. More recently, Loewenstein (2013) has applied physics principles to shed light on the mind's inner workings. He describes how the law of conservation applies at a neuronal level. He also suggests large information chunks move as either a wave (intuition, imagination, unconscious thought, etc.) or as particles (nerve signals). Quantum brain functioning theory may join work posited by Einstein on the conservation of energy in *The Principle of Relativity* to further support the application of cybernetic approaches in understanding human behavior (Lorentz et al., 1952).

The law of conservation simply states that energy changes form and cannot be created or destroyed. At a neuronal level, a person's energy can be measured through dynamic scans such as fMRI to capture particle interactions (National Institute of Health, 2022). Capturing the unconscious energy exchanges that move in waves is not as simple as capturing blood flow as represented in fMRI. Instead the theory of quantum brain functioning relies on correlations with observable phenomenon in physics, as well as case studies reported by scientific observers who have observed themselves (Loewenstein, 2013). Grof and Bennett (1993) suggested the mind has the potential to shift energies through unconscious undertakings that may lead to physiological changes. Chopra (2004) proposed intentional thought and openness to the dimensions of awareness (pure being, conditioned bliss, love, knowingness, myth and archetype, intuition,

imagination, reason, emotion, and physical body) permit the quantum flow of the wave and particle to interact in unison to actualize the best version of self.

Striving for the best version of self, and developing the best version of family life, are ongoing goals of Natural Systems Theory. Individual development may be approached from a drives perspective that theoretically is based on Freud's (1923) work through narrative approaches (e.g.: White & Epston, 1990), biofeedback or mindfulness (e.g.: Khazan, 2019), Gestalt-experiential (e.g.: Stevens, 2007), feminine psychology (e.g.: Horney, 1993), regressive therapy (e.g.: Newton, 2002), as well as many other approaches that meet the individual where they are at to provide safe passage beyond the current, known milieu of existence. Family development approaches may be similar in the use of the aforementioned narrative and experiential strategies, and may also successfully integrate other Marriage and Family Therapy practices such as Adlerian Family Therapy (Adler, 1956), Multigenerational Family Therapy (e.g.: Bowen, 1994), Human Validation Process Model (e.g.: Satir, 1988), Structural Family Therapy (e.g.: Minuchin, 1974), Strategic Family Therapy (e.g.: Fisch et al., 1982), Solution Focused Therapy (e.g.: Berg, 1994), or other systemic therapies.

DoS can be therapeutically approached through a variety of strategies supported by Natural Systems Theory. The benefits of improved DoS in recent research have included increased health and wellbeing (Buser et al., 2019), enhanced family relationships (Dolz-del-Castellar & Oliver, 2021), and reduced anxiety (Lampis et al., 2020). A closer look at anxiety reduction, consequences, and management is warranted to better understand self-differentiation.

Relationship Between Performance Anxiety and Self-Differentiation

The fear of failure, entropy, and death perseveres as undue influences in modern culture (Solomon et al., 2015). Through the sharing of knowledge, beauty, art, science, and compassion,

groups become inclusively *us* orientated, no longer seeing others outside of themselves. Inclusive groups may experience others as part of *us*. In contrast, *us* versus *them* thinking increases fear despite access to rational, scientific proofs that clearly indicate alternative means to transcend the division of fallout through deep pragmatism (Greene, 2013).

Deep pragmatism may be needed to move beyond merely rational thought that invites in the ghouls and ghosts of fear that cry in mimicry, promoting separation from others, demise, insecurity, and eventual death. Becker's (1997) work addressed the undercurrent of terror spurred on by the threat of evil that lurks at a subconscious level. To overcome the fear requires heroism. "To be a true hero is to triumph over disease, want, death," (Becker, 1975, p. 149). Perhaps to be a true hero requires compassion and love for oneself, and others, not knowing where it flows from, nor clear where it flows to (hooks, 2001). The absence of knowing can be anxiety provoking. Perhaps an acceptance of ambiguity is necessary to be heroic, deeply pragmatic, compassionate, and self-differentiated (de Beauvoir, 2018).

Bravery and heroism to face the unknown melts anxiety, as well as supports intrapersonal and interpersonal development. Achieving a highly self-differentiated state of being promotes bravery to know oneself, allows for others to be themselves, and creates intentionality in action with minimized performance anxiety (Kerr & Bowen, 1988). At first glance, the relationship between performance anxiety and self-differentiation may appear to be like the Ouroboros, the snake swallowing its own tail without a clear beginning or end. Fortunately, through Natural Systems Theory the challenge of duality-paradox is familiar and welcomed. Each scale of the snake presents a path of entry to enhance DoS while lessening anxiety through the heightened awareness gained through the dynamic approach.

A multifold approach toward increased self-differentiation starts with awareness. Yontef (1993) suggested the means to achieve self-knowing may be found through the trifold path of awareness, dialogue, and processing. Naming and labeling emotions has been shown to increase wellbeing (Erbas et al., 2019). Improved outcomes and increased compassion have been correlated with negative emotion differentiation for clients in a recent study conducted by Galili-Weinstock et al., (2019). Awareness through experience, discussion, and integration may benefit individuals in seeking out paths to reduce anxiety, and accomplish goals.

Goals are more successfully met with a reduction in the negative aspects of stress. Some stress is useful for living entities to maintain drives, functioning, and direction. Too much stress, or more than a person can handle, may shut down physiological systems (Dana, 2018). Physical processes can be studied to better understand the body's influence on available emotional responses (e.g.: Porges, 2011). Additionally, understanding the connection between emotions and physical responses that do and do not serve a person well may open a gate leading toward the path of wellbeing.

The goal of wellbeing may be to uncover the treasure of knowingness in the journey toward self-differentiation. Clarity on experiences of fusion, emotional reactivity, emotional cutoff, and I-position may provide a measurement of a person's base of operations for future reduction of anxiety (e.g.: Lampis et al., 2020). From the greater understanding of emotions flows the potential for greater insight. From greater insight, a deep pragmatism may develop. Deep pragmatism may bestow an increase in comfort with the unknown, embracing stress as a necessary part of life. Furthermore, deep pragmatism may hone the intention to create tools that effectively deal with the challenges that are inherent to anxiety and performance anxiety.

Through the empirical evidence to date, increased DoS is correlated with lessened anxiety (e.g.: Lampis et al., 2020). Inversely, a lessened sense of self and higher emotional cutoff and fusion are correlated with an increase in anxiety issues. The inverse relationship between DoS and anxiety present as an opportunity to enable individuals to deal with stressors more effectively in their families, as well as in other arenas of social exchange.

Insufficiencies in Previous Research

Research on DoS and anxiety has predominantly focused on dyadic relationships, family systems, and individuals working through aspects of depression and anxiety (e.g.: Rodriguez-Gonzalez et al., 2019). There have not been any recent studies that have used applications of DoS in other areas where group interactions are prevalent. DoS and Natural Systems Theory may be applied to understand individual perceptions of experiences in other shared social systems such as the workplace, academic settings, or areas in which social exchange is a dominant aspect of an individual's involvement. The opportunity for empirical exploration of DoS and Natural Systems Theory may provide insights that help improve individual and group exchange, strength management, intentionality of action, and inclusivity of diversity.

Purpose of Study

The relationship between DoS and anxiety has been established as an inverted relationship that increases a person's sense of wellbeing while promoting resiliency. Adults vary in their experience of anxiety and their learned ways of managing it. This variance may be at least partially accounted for by the multigenerational experiences of anxiety within each person's family of origin (Bowen, 1994). Natural Systems Theory postulates that increasing an understanding of the above processes related to one's own individual and familial development will decrease the experience of anxiety as well as its debilitating consequences. The pilot study

explores the application of DoS and Natural Systems Theory outside of the family unit, and may serve as an interesting reference for future research that explores social exchange paradigms utilizing a similar criterion and contentions.

Research Question

The purpose of the study is to investigate a singular question: Will a brief psychoeducational introduction to the processes and meaning of "self-differentiation" within the context of a small group of students be sufficient to produce an increase in self-differentiation and a corresponding reduction in anxiety related to academic performance? Through the study of this question, the research hopes to offer a viable contribution that supports DoS and Natural Systems Theory to be actively explored in other social arenas outside of family and individual wellbeing.

Summary

In summary, the central concept of Natural Systems Theory, self-differentiation, is a universally experienced lifelong process of maintaining a balance between being an individual and being part of a group, as well as between cognitive and emotional functioning. Moreover, the theory suggests that the individual's experience of anxiety will be defined by the balance or homeostatic state that the person perceives, creates, and manages for themselves. Individuals may have varied experiences and perceptions of similar events that are influenced greatly by the multigenerational experiences of anxiety within each person's family of origin. Natural Systems Theory suggests that increasing the awareness and processing of experiences related to one's own individual and familial development will reduce the experiences of anxiety while providing useful perspectives that may create avenues for intentional behavioral change.

Chapter Two: Review of the Literature

The contributing theories that have fed into Natural Systems Theory are varied and farreaching much like the parent discipline of Marriage and Family Therapy. Theoretical
foundations have been responsively adapted to the micro-, meso-, exo-, and macro-system
influences exerted upon individuals and families (Bronfenbrenner, 1992). To elucidate where the
concepts of balance between cognition, emotion, self, and self-in-group stem from, an
investigation into areas of myth, existentialism, mindfulness, perception, compassion,
depression, stress, health habits, and intention are warranted. Additionally, therapeutic
approaches that focus on experiential and multigenerational, social perspectives, transactional
analysis, cybernetic and physiological, as well as the differentiation of emotions are deserving of
further review.

Spirituality and Myth: Meaning Making

The impact meaning bestows on wellbeing has been explored for millennia through cultural, spiritual, and religious contexts (Campbell & Moyers, 1988). More recently psychology has taken a stronghold in the practice of meaning making through metaphysics in the investigation of interactions (Bolis, & Schilbach, 2018), redefinition of focus toward hermeneutics (Pérez-Álvarez, 2018), and the epistemology of ontology (Decock, 2018). Integrative approaches in mental health care that incorporate traditional practices are gaining popularity, and scientific support (Lake, 2009). Historically spirituality applications in mental health have included Eastern philosophies, hermeneutic approaches, literature and life stories, myth and mysticism, as well as a variety of perspectives that qualify and quantify life experiences.

Eastern Philosophies and Practices

The mid-twentieth century interest in Eastern philosophies and practices in the West (e.g.: Watts, 1961) gave way to a rebirth of interest in the 1990s (e.g.: Chopra, 1994; Judith, 1996; Kabat-Zinn, 1990; Kabtznick, 1998). Increased access and knowledge of qigong (e.g.: Lin, 2008), kundalini yoga (e.g.: Khalsa & O'Keefe, 2002), Ayurveda (e.g.: Godagama & Hodgkinson, 2004), and many other Eastern health practices assisted integrative works such as those presented by Emmons (2010), van der Kolk (2014), and Auman (2014) in providing guidance to mental health clients and practitioners. Recently published works on chakras (Dale & Childs, 2021) and tantric philosophies applied to wellness (Auman, 2022; Chinnaiyan, 2017) contribute to the growing base of knowledge that Eastern practices present. The integrative approaches may offer more choices for clients, and a greater opportunity to develop creative solutions in mental health strategies for practitioners that may be improved through collaborative approaches (Lake, 2009).

Recent research on Eastern health practices has shown an increased public interest in the use of integrated approaches, and cautions practitioners that further empirical study is warranted for understudied disciplines (Danylova et al., 2021). Meditation and breath work practices have significant recent research that supports ease of use, limited contraindications, and positive outcomes for participants (Bringmann et al., 2021; Schlechta Portella et al., 2021; Vancampfort et al., 2021). Eastern spirituality approaches may offer practitioners deeper insights, and interpretations of personal meaning that blend with foundational belief systems of an individual's origin culture or adopted culture.

Hermeneutic Approaches

Hermeneutics, a method by which interpretations may be made, support rationalism and consensus within belief systems. The indigenous American cultures contributed significant

improvements and gains benefitting organized government, egalitarianism, and social exchanges during the early European colonization of the Americas (Zinn, 1999). Fluid integration of natural, social, symbolic, and intrapersonal perspectives may offer universal insight that contributes to gnosis through creation beliefs, and personal responsibilities (e.g.: Adams, 1990; Eagle, 2002; Lame Deer & Erdoes, 1994; Marshall III, 2010; etc.). Recent writing by Mitchell (2018) continues to advocate for a balance between responsibility, awareness, activism, and respect for the Creator that stands in alignment with other inclusive interpretations of meaning. Learning from indigenous American cultures, and recognizing the important contributions extended within our shared culture, may provide helpful guidance in development of spiritually aware mental health care.

Spiritual awareness in discussion of ontological measures in the West has been addressed extensively by James (2012) and Buber (1996), as well as Schweitzer (1990). James (2012) suggested religious experiences may provide enlightenment, pragmatism, and moral guidance. Schweitzer (1990) described reason and logic as central to the will-to-live, and suggested with advanced human development an advanced spiritual awareness unfolds. At the end of his autobiography he wrote, "Whether we are active or suffering, we must find the courage of those who have struggled to achieve the peace that passeth all understanding," (Schweitzer, 1990, p. 244-245). Foundational study and interpretation of biblical works (e.g.: American Standard Bible, 1929; King James Bible, 2017, etc.), and other religious works, has contributed to the responsiveness of mental health care and delivery to meet clients where they are at.

Martin Buber was perhaps one of the best-known practitioners for meeting people where they are at with respect towards his deep scholarship and personal value of spirituality. His work *I and Thou* (1996), originally written in 1922, has become an integral part in understanding and

expressing the interpersonal acknowledgement of value. Buber's roots were in the philosophical study and revival of mystical Hasidism (*The Torah*, 2015). The hermeneutic value of the mystically derived dualistic stance of *I and Thou* has influenced modern Marriage and Family Therapy service delivery with respectful acquiescence when applied to various religious and spiritual belief systems. Beautifully explained, Buber (1996) described aspects of self-differentiation long before DoS was named as such:

Every actual relationship in the world rests upon individuation: that is its delight, for only thus is mutual recognition of those who are different granted-and that is its boundary, for thus is perfect recognition and being recognized denied. But in the perfect relationship my You embraces my self without being it; my limited recognition is merged into a boundless being-recognized. (p. 148)

Current hermeneutic approaches seek to explore foundational work while finding new directions that the interpretations derived may be usefully applied against. Chauhan et al. (2020) recently reviewed the experiences of happiness and joy revealing the need to be intentionally engaged for the culmination of the joy experience to flourish. Gullick and West (2020) explored stances of death within the context of inauthentic or authentic propositions for patients diagnosed with terminal illnesses. Results were discussed with a proposal for future research to organize Heidegger's (2008) thoughts on death to create grasping points for future research on death and dying. Bologna et al. (2020) presented recent research to join meaning-making, subjective understanding, unconscious influences, and power structures within professional environments for the intent of managing relationships more effectively. The goal of finding rationalism and consensus within belief systems will likely continue to challenge researchers, and provide room for growth for many years to come.

Literature and Life Stories

Literature and biographies have contributed a significant amount of meaning-making material that has remained a fertile source for Natural Systems Theory, and the discipline of Marriage and Family Therapy's reflection, growth, and advancement. Literature may inform theory or be informed by theory in the creation of individual, family, or relational drama that elucidates existential answers regarding the meaning of life. Work by Kant (1965) written in the late eighteenth century helped define metaphysics, and created a launching pad for many other literary philosophic meanderings such as work by Gibran (1931), Kafka (1968), Camus (1989), and de Beauvoir (1984). Perhaps earlier fifteenth century writing by de Pizan (1982) helped inspire optimism and feminist sensibility in future writers such as Fuller (1999), Woolf (1981), Horney (1993), and Paglia (1991). To create effective strategies for the future, we may go back to understand our shared pasts.

Biographies may help engage readers, whether practitioner or patient, in shifting perspectives to see a wider expanse of options broader than otherwise discernible. Hidden possibilities may emerge through a life story that has explored options when faced with life challenges in ways different than one's own experiences. Mankowitz (1982) described the brief and remarkable life of Adah Isaacs Menken, actress, poet, and painter who unconventionally approached life with an open and vulnerable candor in the mid-nineteenth century. In her own words, Menken described her creative process as reliant on her soul's direction:

And yet I know that the soul that prompted every word and line is somewhere within me, but not to be called at my bidding – only to wait the inspiration of God. It is this soul that makes me religious, affectionate, and good in many things. (p. 199)

Personal biographies that align the reader with the protagonist in overcoming challenges while gaining insight may provide strength, resiliency, and hope. Magambi and Aeilts (2015) wrote succinctly in summarizing Magambi's experiences while living as a refugee for 27 years of his life, "Shared pain brings hope" (p. 134). Strength from within, and from beyond, may create miraculous experiences that inspire, renew faith, and offer a sense of transcendent wondrousness.

Immaculée Ilibagiza described her escape while hiding with a group of women in a small bathroom during the 1994 Rwandan genocide:

If they catch me, they will kill me...Oh God please! I screamed silently...I'm praying so hard, God, so hard...but they're close, and I'm so tired! Oh, God...I'm so tired. I felt faint-consciousness slipped away from me...Then I was sleeping...and dreaming a sweet dream of Jesus...Then Jesus spoke, "Mountains are moved with faith Immaculée, but if faith were easy, all the mountains would be gone. Trust in me, and know that I will never leave you. Trust in me, and have no more fear. Trust in me, and I will save you. I shall put my cross upon this door, and they will not reach you. Trust in me, and you shall live." Suddenly I was back on the floor again with the others. Their eyes were still closed, but mine were wide open, staring at a giant cross of brilliant white light stretching from wall to wall in front of the bathroom door. (Ilibagiza & Erwin, 2006, p. 130-131)

Stories of life may be penned to teach, to process, and to preserve the important ideas that the writer would like to pass on. Irvin Yalom (2009) described his personal experiences in sharing stories as creating a rippling effect of ideas:

But I can't deny that writing this book about death is of value to me personally. I believe that it acts to desensitize me: I guess we can get used to anything, even death. Yet my primary purpose in writing this book is not to work through my own death anxiety. I believe I write primarily as a teacher. I've learned a great deal about tempering death anxiety and wish to transmit what I can to others while I'm still alive, still intellectually intact. Thus, the enterprise of writing is intimately associated with rippling. I find great satisfaction in passing something of myself into the future. (p. 178)

In recent research, life stories shared with practitioners have helped increase patient care outcomes in health care (Roberts et al., 2021; Rosen et al., 2022), as well as improved outcomes in medical student training programs (Lam et al., 2022; Walker et al., 2021). Life stories may help medical and mental health care professionals effectively join with the clients and families they are serving while supporting the growth of personal myth, story, and legend.

Myth and Mysticism

The stories, legends, and myths of clients may serve as a valuable role in creating a strong sense of self. The importance of myth in wellbeing has been described by Jung (1964), Campbell and Moyers (1988), Bond (1993), Pinkola Estes (1995), and more recently Greene (2018) in her exploration of Jungian archetypes within analytical psychology. Myth may provide a sense of purpose in life, and a driving force for recovery in the lowest points of despair that may temporarily overwhelm the human experience. Jung (1995) describes the process of finding oneself in mythical terms as without "linear evolution; there is only a circumambulation of the self. Uniform development exists, at most, only in the beginning; later, everything points toward the center" (p. 222).

Within the center of mythic development, a person may find themselves, and the greater sense of the collective, are available to access if the winding road inward is pursued. Starhawk (1987) describes, "Memory sleeps coiled like a snake in a basket of grain deep in the storehouse. Breathe deep. Let your breath take you down. Find the way there. And you will find the way out" (p. 70). Finding the way can be challenging with impediments of fear causing a fear of love confused with the fear of death blocking the path to individuation (Laing, 1973). Bond (1993) suggested that individuation is attained through the personal journey of myth creation.

Mythic self-discovery may be penned through prose, poetry, or journaling. The following stands as this author's personal example of discovering the value of patience in impatience, a rather common, paradoxical experience according to Watzlawick (1990).

Fruit on the vine

Yet to ripen will bear the sweetest taste

When the succor can quench thirst

Providing what has been longed for

Impatiently waiting for the day

The fruit may be plucked

And its juice running down

Flowing as earthly delight (Wood, 2022)

Mythic self-discovery may also be arrived at through mystical experiences that change sensory perception, and allow for a transition into greater experiences of self-differentiation (e.g.: Grof, 1993; Jung, 2009; Leary et al., 1992; Watts, 1961). The Song of Solomon (King James Bible, 2017) features the voice of the Bride describing what are believed to be fertility rituals, and mystical experiences of love (e.g.: Dieu-Le-Veut, 2019; Husain, 1997; Watts, 1973).

Love itself may serve as a mystical experience. "Love is surely a disposition of the heart which radiates on all sides like light" (Watts, 1973, p. 119). Through the light of love, inspiration may be obtained.

Inspiration may act as a reservoir for growth, change, and self-knowing. Govinda (1969) described the universal consciousness accessible only through states of mind that are inspired and joyous. Schweitzer (1990) reflected that love provides access to the metaphysical through the sense of joy that love bestows. Govinda (1969) further suggested that connection to the collective unconsciousness "is only experienced in a state of enlightenment, or in the highest states of meditation" (p. 148). Access to the collective and universal myths and mystical experiences continues to provide intrigue in research and reflection for the purposes of healing, self-knowing, and self-differentiation.

Recent research in the use of mind-altering substances to improve mental health have roots in highly questioned work by Leary et al. (1992) and Leary (1999). Recently studies using psilocybin have had excellent results. Schmitt and Richter (2021) reported:

If larger studies verify that psilocybin is at least as effective as existing treatments, the agency could officially approve it as a therapeutic option. Experts speculate that it could happen as soon as 2025. For MDMA, granted breakthrough status even earlier, approval is expected by 2023. (p. 27)

The treatments using psychedelics to gain access to mystical experiences may be appropriate for some clients, but perhaps others will not want to pursue such measures.

In other recent work, Lewis (2016) compared the benefits of narrative approaches, mindfulness, and mysticism from the practitioner perspective with positive outcomes noted.

Tarrant (2017) and Khazan (2019) offered comprehensive reference texts that reviewed and gave

examples of approaches such as meditation, mindfulness, and breathing, as well as provided user guidance. Mills (2019) revisited the collective unconsciousness theory to redefine the concept as a mystical ideal, and suggested a literal expectation to have the collective opened to clients may be presumptuous. Jointly efforts to understand mysticism and myth have left room for further introspection on the questions of what approaches may best qualify and quantify human experience.

Quantification and Qualification of Being Human

Meaning making has been reviewed from the perspective of Eastern philosophies, hermeneutic approaches, literature and life stories, as well as myth and mysticism thus far. Other various methods may also be used to capture meaning through qualitative approaches such as narrative therapy, and quantitative approaches such as the exploration of multiple selves through life regression. Postmodern approaches of narrative therapy as presented by White and Epston (1990) have deep roots in Foucault's (2006) philosophy of questioning programming that shapes experience exerted by the dominant culture. Through seeking out individual truth, shrouds of socially dominant falsehoods may be uncloaked and revealed. As Yontef (1993) suggested, once awareness is possible, dialogue and processing may begin. With narrative approaches, White (2007) suggested individuals can explore the stories that have been accepted as truths and reconstruct them in ways that honor a person more wholly.

To understand a person more holistically implies acquaintance with the individual's soul. Dayton (1995) suggested, "Our souls are waiting for us to know them and through them the soul that contains all life" (p. vii). Holistic understanding of self may be quantitatively explored through multiple life regressions. Through psychoanalysis, Weiss (1988) began exploring multiple past lives with a patient unintentional on his or the client's part. The client was given

the pseudonym Catherine to protect her identity. Catherine's anxiety and nightmares were successfully treated through multiple past life explorations. The success of the experience opened the possibility to explore the method with other interested clients. Weiss (2005) completed his fifth follow-up book with numerous case studies supportive of past life regression as an instrument for healing in psychoanalysis.

In addition to the benefits derived from the exploration of past lives, Newton (2020) used hypnotic regression to help clients gain insight into the existence between incarnations. He termed the case studies and therapeutic method *life between lives* (LBL). His exploration of LBL began in 1968 organically with the intention to take a client to the source of her mood disorder (Newton Institute, 2022). He first visited a past life inadvertently with a client while treating the client with hypnosis for depression. Like Weiss's (1988) account, Newton (Newton Institute, 2022) described the discovery of past lives as an exciting and fulfilling means to explore to promote client wellbeing.

Many other approaches have emerged to understand life as a measurable quantity of experiences not bound by a single life. For example, regressive techniques have been used to explore past lives with astrologic guidance (e.g.: Avery, 1999), document children's memories of past lives (e.g.: Tucker, 2005), and visit in-between lives for higher wisdom (e.g.: Dyer & Hicks, 2014). Currently the University of Virginia houses the Division of Perceptual Studies that seeks to provide empirical evidence for mind, consciousness, and physical reality intertwined relationships (University of Virginia, 2022). Examples of recent research include an overview of the fear of death correlated with near-death experiences (Pehlivanova et al., 2022), the reprieve from dementia experienced by patients prior to death (Batthyány, & Greyson, 2021), and an overview of cultural influences and variables that are commonly supportive of past life

investigation (Moraes et al., 2021). The greater awareness based on research and case studies related to the quantity and quality of life cycles may lead to an inquiry of how freedom and will influence perception.

Existentialism

The questions existentialism directly addresses offer insight into why a person may think, feel, and act as derived from their perceived freedom and will to act. Mary Wollstonecraft (2008) sensibly advised:

The ridiculous falsities which are told to children, from mistaken notions of modesty, tend very early to inflame their imaginations and set their little minds to work, respecting subjects, which never intended they should think of till the body arrived at some degree of maturity; then the passions naturally begin to take place of the senses, as instruments to unfold the understanding, and form the moral character. (p. 204)

Then as it is now, concern exists for remaining honest with those who may be subjugated as part of a care giving process. A lack of honesty and transparency may result in stunted growth and future existential dread bred through a perception of bondage upon one's freedom and will.

Perhaps no greater source for the experience of bondage in freedom and will exists than through futility and demise. Becker (1997) explained:

It all boils down, again, to the fact that the prophets of unrepression simply have not understood human nature; they envisage a utopia with perfect freedom from inner constraint and from outer authority. This idea flies in the face of the fundamental dynamism of unfreedom that we have discovered in each individual: the universality of transference. (p. 266)

To be free is to be self-differentiated to know where oneself begins and ends, to know where one's family and social relationships begin and end, and to be aware of the process of transference as the action is occurring (Bowen, 1994). Freedom implies having shared choice in the process. With shared choice comes awareness, the opportunity to discuss matters openly, and the processing of options to limit the constraint, the negative effects of transference, and subjugation. Death may be accepted in an honest dialogue, reducing the threat of evil's binding power (Becker, 1975).

Threats on freedom, health, and life may be faced bravely and directly to increase the sense of self. Chopra (1994) stated, "Any pain or disease we have is like an island of discomfort, for in comparison to any one disease, our healthy awareness is as big as an ocean" (p.23).

Awareness may be helpful, and vast like an ocean, when primed with a self-differentiating skill set. When not versed in the art of self-differentiation and mindful awareness of emotions, proximal and distal reactions to death can lead to poor health choices and negative consequences (Solomon et al., 2015). Reminders of death may lead individuals to drink excessively, drive recklessly, seek out extramarital affairs, and a flurry of other actions that are not in a person's best interest as they seek out ways to hide from the truth.

Truth may be a source of inspiration, opportunity, and learning. "To me it seems that humility is truth. I do not know whether I am humble, but I do know that I see the truth in all things" (Bauer, 2005, p. 84). With truth, awareness is clear. Without truth, awareness is muddled, and messages are lost (Bateson, 1972). Wittgenstein (2009) cleverly offered, "What I want to teach is: to pass from unobvious nonsense to obvious nonsense" (p. 141). In other words, conditioning, transference, and expectations may create realities that do not exist. Assumptions

that are based on expectations may lead to dishonesty with oneself, further frustrating the process in creating tighter bondages.

Awareness of truth flows from an open acceptance based on deep pragmatism (Greene, 2013). Fuller (1991) suggested, "The mind, roused powerfully by this existence, stretches of itself into what the French sage calls the 'aromal state'. From the hope thus gleaned it forms the hypothesis, under whose barrier it collects its facts" (p. 79). Hope provides an optimism that allows for improved relationships with others and self to occur. As Camus (1983) suggested, awareness of absurdity may be necessary for the essences of beauty, truth, and love to be experienced. Awareness existentially may be enhanced through mindful states of intention.

Mindfulness

In addition to mindfulness having a spiritual history within Eastern practices such as Buddhism (e.g.: Kabat-Zinn, 1990), mindful practices were investigated empirically early on within Darwin's (2009) *The Expression of the Emotions in Man and Animals*. He suggested, "attention closely directed to any part of the body tends to interfere with the ordinary and tonic contraction of the small arteries of that part" (p. 320). The excerpt considered the effects of blushing, and discussed in length the impact mentation has on emotions' physical responses.

Mindfulness practices have gained popularity with recent research reviewing a variety of applications including improving outcomes related to COVID-19 (Behan, 2020), depression (Segal et al., 2020), opioid recovery (Fatkin et al., 2021), and behavioral change (Schuman-Olivier et al., 2020). Mindfulness practices have also been actively studied as a way to gain a present moment focus to improve performance within the workplace (Coo, & Salanova, 2018; Tuckey et al., 2018), and to improve responses in treatment after trauma (Ataria, 2018). Mindfulness practices have a lengthy history of use in engaging individuals to become more

viscerally aware during therapeutic sessions, and to improve the long-term acquisition of differentiation skills that promote an awareness in thoughts and feelings within relational contexts (Kerr & Bowen, 1988).

Lake (2009) presented a comprehensive review of various complementary approaches including mindfulness for the reduction of anxiety, management of schizophrenia, and improvement of concentration with attention deficit hyperactivity disorder. Mindfulness has been shown to be beneficial for many clients and has limited contraindications with caution recommended for clients experiencing psychosis (Khazan, 2019). Mindfulness approaches to reduce stress (e.g.: Auman 2014; Emmons & Kranz, 2006; Kabat-Zinn, 1990) and improve functioning (e.g.: Chopra, 1994; Rappaport, 2014; Tarrant, 2017) have Family Systems roots in foundational work by Rogers (2015) and Satir (1976) that promoted seeking out an appreciation for the holistic self that validates and embraces self, others, and the process of being human.

Experiential and Multigenerational Approaches

The experience of being human may be explored through systemic approaches that tap into conscious memory, unconscious memory, and natural processes of evolution that shape individuals and families over generations. Applying a Natural Systems Theory (Bowen, 1994) approach to an experiential method of processing such as Gestalt Therapy (Perls et al., 1994) may allow for individual and family dynamics to be better understood through a creative, inclusive, and holistic process. The eight primary concepts of Bowen (1994) provide a strong starting point for review. Gilbert (2004) abridged Bowen's (1994) concepts, creating a useful reference for practitioners that defines the essential concepts from the most basic to the most complicated: the nuclear family emotional system, the DoS scale, triangulation, emotional cutoff,

the process of family projection, the process of multigenerational transmission, sibling position, and the social emotional process.

Nuclear Family Emotional System

Families share anxiety between members while trading autonomy for fusion as part of the family relationship (Bowen, 1994). Anxiety may appear in various forms that lead to triangulating, conflicts, distancing, or functional imbalances. In recent research, Brook and Willoughby (2019) found shyness and social anxiety have similar presentations and constructs. Mjelve et al. (2019) suggested children presenting with shyness may benefit from positive psychosocial feedback and additional tactical supports when compared with children who do not present with shyness. Castagna et al. (2019) reported that children's working memory mediated depressive symptoms when encountering negative self-directed feedback, but did not moderate anxiety. Finding ways to limit the negative effects of anxiety, reverse trait anxiety response, and understand individual, family, and social impacts that anxiety may produce has been shown as useful in research presented by Nook et al. (2021) that investigated emotional differentiation in a longitudinal study with adolescents. Over time families influence one another intentionally, and unintentionally through endogenous influence (Bowen, 1994). McArthur et al. (2019) found that greater positive parental involvement was correlated with lower levels of negative selfperception for children. In contrast, higher levels of negative parental control and rumination were correlated with children's lower self-perception.

The family provides a person a sense of belonging that is contrasted with a need for individuality (Bowen, 1994). Peleg et al. (2018) suggested that anxiety may act as a mediator between self-differentiation and quality of life. Peleg and Messerschmidt-Grandi (2019) reported that emotional reactivity and I-position were positively correlated with trait anxiety suggesting

that self-differentiation is an important concept to explore when seeking to reduce trait anxiety. In the Midlife Development in the United States study with 854 participants' data, Priest (2019) reported that the use of self-differentiation data may be helpful to improve health outcomes. In a study by Dolz-del-Castellar and Oliver (2021), it was reported that family wellbeing and trait anxiety were mediated by self-differentiation. Measuring and understanding self-differentiation has been reported to be valuable within a variety of applications.

Differentiation of Self Scale

The DoS scale captures a person's ability to be autonomous and at the same time to function as part of a group (Bowen, 1994). Kerr and Bowen (1988) further developed concepts of self through the differentiation of pseudo-self, basic-self, the boundaries of each, and the guiding principles for each. The pseudo-self is a functional-self that develops to manage relationships, and to be responsive within the confining limits of relationship systems. The pseudo-self develops to protect oneself in the family of origin, resolve conflicts as an individual, and as a part of a family or group. The basic-self is differentiated, rational, objectively emotive, and knows oneself (Bowen, 1994). Boundaries between the pseudo- and basic-self are more permeable when less differentiated, and less permeable when more differentiated. Recently Calatrava et al. (2022) suggested that there is a need for longitudinal and causal research designs to report on the stability, multigenerational transmission, and interventions surrounding DoS.

The Differentiation of Self Inventory-Revised (DSI-R) was developed and presented by Skowron and Schmitt (2003) as a revision of previous work by Skowron and Friedlander (1998). The DSI-R includes interpersonal and intrapersonal aspects of differentiation including fusion, emotional cutoff, emotional reactivity, and I-position. Research studies have demonstrated increased differentiation of self is correlated with better family functioning (e.g.: Rodriguez-

Gonzalez et al., 2019), improved management of stress (e.g.: Buser et al., 2019), and individual wellbeing (e.g.: Fivush, 2019). Positive aspects of DoS benefit the individual and the family. In a study of 175 undergraduate presented by Monaghan Simon et al. (2019) it was reported that insecure attachment was positively correlated with depression. Negative outcomes of underdeveloped differentiation may lead to emotional reactivity, cutoff, fusion, and triangulation (Kerr & Bowen, 1988).

Triangulation

Triangulation may occur when anxiety rises, and a two-person system pulls in a third person to alleviate the stress (Bowen, 1994). As the anxiety continues to mount, more individuals may be pulled into two-person conflictual systems to create a geometric labyrinth of triangles. When a child takes on the anxiety of a parent, the child becomes susceptible to holding the anxiety. Over time, given the many opportunities in a family system marked with conflict to become part of a triangle, the child may develop an anxiety disorder.

Anxiety may be resultant of family system tension. Recent research by Lampis et al. (2020) reported that low I-position related to sense of self, as well as high fusion and reactivity are correlated with anxiety related problems. Xue et al. (2018) suggested that anxiety disorders are correlated with low DoS and an increase in avoidant attachment. Anxiety may be derived naturally as a response to the environment, through joining with the family system, or by being brought into an emotionally volatile dyadic relationship.

Emotional Cutoff

The undifferentiated individual is likely to experience a reduction in autonomy, more emotional reactivity, and greater difficulty in taking a stance on concerns that are emotionally relevant (Bowen, 1994). Lampis and Cataudelia (2019) reported that the most significant DoS

variable correlated with avoidant behaviors is emotional cutoff. In the study, data was sampled from 350 subjects who completed the DSI-R (Skowron & Schmitt, 2003) as well as the Experience in Close Relationships-Revised Scale (Fraley et al., 2000) and the Personal Bonding Instrument (Parker et al., 1979). Lampis and Cataudelia (2019) stated the data from the various tools employed suggested emotional reactivity and a nominal paternal care were more predictive of anxiety than other factors. Essentially it has been reported that parent(s) set the standard and intent for communication patterns to be modelled after by the children within a family unit. Parental projection may be a leading determinant of trait anxiety.

Family Projection

Parents pass on undifferentiation to their children, creating more of the same for future generations (Bowen, 1994). Each child receives attention from their parent(s) based on available time, energy, and necessity. "In that way, different children can end up with differing amounts of inappropriate focus" (Gilbert, 2004, p. 69). The differing focus of attention helps explain why children with the same parents can develop with significant differences in measurable life success. "A child who grows up relatively outside of the family projection process can emerge with a higher basic level of differentiation than the parents" (Bowen, 1994, p. 477). There is an opportunity for improvement through intention, and awareness.

Parents act automatically when they project undifferentiation upon their children. The parents are not to blame as they are functioning in a way they perceive to be appropriate within the system. Once the system of undifferentiation is identified, positive changes can be intentionally sought out. Connery and Murdock (2019) investigated countertransference behaviors and found that hostile-submissive behavior was correlated with overinvolved countertransference. Inversely, hostile-dominant behavior was correlated with under involved

countertransference. The family system works as a unit to create a homeostatic environment at whatever level of differentiation is present (Bowen, 1994). The level of differentiation may be carried on to the next generation, and many future generations to come through multigenerational transmission.

Multigenerational Transmission

The family may pass on the parents' level of differentiation to the children with one child that is targeted, receiving a greater projection of anxiety (Bowen, 1994). The child who receives the most projection from the parent(s) will develop as more undifferentiated than the parent(s). The remaining children are likely to develop with the same level of differentiation as their parent(s). To see the effects of projection over many generations, a family genogram may be useful (McGoldrick et al., 2008). Facts can be derived from the family genogram to explain how differentiation evolved with consideration of longevity, health, location, professions, educational degrees, income, reproductive history, marriages and coupling, and chronology of life events (Bowen, 1994; Gilbert, 2004).

Development varies based on awareness of differentiation, and may have notable gender patterns in some cultures. Rodriguez-Gonzalez et al. (2019) reported from a study of 195 heterosexual Spanish couples that female partners who experienced emotional cutoff were more likely to influence their partner in experiencing emotional distress and coupling issues. In the same study, male partners that experienced emotional cutoff were more likely to influence their partner in experiencing coupling issues, but not emotional distress. In a second study conducted by Lampis et al. (2019), research with 137 heterosexual Italian couples suggested that males are more likely to depend on their personal I-position, and women are more likely to be affected by their own and partner's I-position as well as emotional cutoff while coping with coupling issues.

Handley et al. (2019) stated in a review of 342 heterosexual couples from the United States of America that the female participants reported higher levels of emotional reactivity, and the male participants reported higher levels of emotional cutoff. Gender and cultural differences may be worth investigating further in multigenerational projection of anxiety and regarding sibling position.

Sibling Position

The sibling position concept was originally introduced by Toman (1962), and influenced Bowen's (1994) work in developing his own theory. Toman (1962) credited Adler (1956) in laying the groundwork for his further development of the family constellation. Toman (1962) posited that many influences developed personality. Sibling position has been asserted as an equally important factor to consider when seeking out clarity on personality development. No specific placement within the sibling order may be defined as the best or worst. Each position in birth order holds strengths and weakness with an inherent unique perspective for each sibling. Eleven possible positions have been defined based on birth order.

Birth order and sibling position alone do not define the likely development of DoS (Bowen, 1994). It is also important to consider the overall functioning and level of DoS during the formative years with respect to parental projection. If a child is raised in a stable environment with little projection of anxiety, they would more likely experience greater differentiation than their sibling position would predict. If a child is raised in a stressful environment with undifferentiated parental guidance, they would be less differentiated and experience the predicted sibling order weaknesses with increased deficits during their formative development.

Recent research by Tener, Tarshish, and Turgeman, (2020) presented insight into the complex sibling dynamics in cases of sibling sexual abuse (SSA). Assumptions discussed in the

research included the nature of perpetrator and perception of trauma. Findings supported allowing the client to define the experience based on their own interpretations, and provide support for SSA with respect to the sibling subsystem. Carretier et al. (2022) reviewed three case reports of SSA and suggested that evaluation requires attentive listening and a multidisciplinary response to provide responsive, and emotionally appropriate care. Meeting clients where they present at through joining with them, and encouraging client narration to increase understanding, may improve client dialogue, awareness, and processing.

Social Emotional Gestalt Exploration

Emotional processes at the societal level may lead to social regression similar to how the rise of anxiety in a family may lead to mental illness (Bowen, 1994). Regression builds anxiety at the family unit and societal levels. Culturally relevant issues to the family that increase social anxiety include permissive parenting, pleasure as a measure of success, sexuality as a commodity, and the blame of parents as an accepted truth.

First, permissive parenting may be defined as allowing the children to parent themselves, or act as head of the household to make decisions. The lack of strong, loving parental guidance has harmed the nuclear family and negatively impacted society. In recent research Lo et al. (2020) reported parents' and teachers' honest, open, and supportive communication may buffer children from internet addiction. Taking the leadership role as a parent in the home, or as an educator at school, may help reduce anxiety for children, adults, and the system.

Second, pleasure as a continuous measure of success in a family relationship may not be useful for long-term survival of a family. Couples who report difficulty within a marriage often find happiness when the couple intentionally chooses to stay with the relationship. Recent research by Zineldin (2019) suggested that low levels of trust, commitment, communication,

sexuality, and sensuality are highly correlated with divorce as well as depression for the individuals in a failed relationship. Intentional development toward finding solutions to maintain commitment in the ebb and flow of marriage may serve as a useful strategy for new and established couples. Gilbert (2004) stated:

Three-quarters of people who have characterized their marriages as "very unhappy" but have nevertheless remained together report five years later that the same marriages are either "very happy" or "quite happy", meaning that permanent marital unhappiness is surprisingly rare among couples who stick it out (p. 106).

Patience with the process of commitment and building toward a pleasurable marriage may be warranted.

Third, sexuality as a commodity in culture has decreased family cohesion in part by promoting the importance of individuality while detracting from the value of togetherness (Bowen & Kerr, 1988). Anxiety may grow from unreasonable pressure to be sexualized externally from social media, advertisements, and popular culture, as well as internal pressure to measure up to unnatural expectations (Auman, 2014). Paired with an undifferentiated family homeostatic environment, the downward trend in social sexual development may lead to increasing sexual violence. Ilabaca Baeza et al. (2022) reported that socially strong neighborhoods provide the most significant protective factor in the prevention of sexual violence. Countering social anxiety with a sense of community may limit the effects of commoditizing sexuality.

Fourth, the blaming of parents for emotional processing is misdirected within a holistic systems approach (Bowen, 1994). Parents are part of the multigenerational system, and typically

act in their family's best interest based on their available resources that are shaped by personal histories. Gilbert (2004) suggested:

When therapists begin to see the multigenerational process of which all of us are a part, however, it removes the blame factor and gives parents and others a way to understand a way of changing self in our families that is realistic and effective (p. 107).

As young people develop, parental influence may boost or deter growth. Heath and Priest (2015) suggested adolescent rational development grows in stages toward accountability for actions. In early stages of rational development, acting-out precedes reflection before the adolescent typically gains deeper insights. The deeper understanding that actions effect the outcomes experienced, which may be described as mature thinking, is not immediately achieved. Parental influence may shape a child's thinking, but cannot be named as solely responsible (Bowen, 1994). Socially we may move toward a deeper understanding, or as Greene (2013) suggested, deep pragmatism, when awareness, dialogue, and processing permit an exploration and deeper comprehension of social issues.

Through the experiential approach of Gestalt Therapy applied to Natural Systems Theory, a complimentary synthesis of ideas may emerge. Gestalt Therapy honors the natural tendency for assimilation, sensing, awareness, contact-boundary, and excitement to enhance the experience of dialogue and processing (Yontef, 1993). "Gestalt formation always accompanies awareness. We do not see three isolated points; we make a triangle out of them. The formation of complete and comprehensive Gestalten is the condition of mental health and growth" (Perls et al., 1994, p. xxv).

The Gestalt experiential approach engages the individual to experience environmental, familial, internal, and social phenomenon in a safe, therapeutic manner to develop greater awareness of interactions that define one's perception of internalized and externalized experiences. Roubal et al. (2021) suggested in recent research that Gestalt Therapy may provide a dynamic approach to assist clients in finding unique solutions. Aiach Dominitz (2017) reported that Gestalt Therapeutic techniques may be especially helpful in assisting clients gain a holistic sense of self through explorations of perception when other forms of therapy are not effective. The potentialities for revisiting Gestalt Therapy for improving individual, family, and social wellbeing are promising.

Social Perspectives

The literature on societal wellbeing, and social trajectories covers a vast array of topics. Recent empirical evidence reviews physiological, educational, occupational, medical, and emotional health impacts on public wellbeing. Gerdin et al. (2021) reported on pedagogies that improve student and social wellbeing. Waite (2018) summarized current impacts on social wellbeing and health for older adults. Wong et al. (2021) reviewed work-life balance with regards to wellness and social impact. Goffin et al. (2018) suggested the security assimilated in childhood serves as a long-term basis for socialization, and recommended interventions to improve outcomes. Grandner (2020) reviewed cultural influences on sleep and health, as well as the social impact related to disparities of sleep health and public safety. The variety of current research interests may be linked to foundational theories on social wellbeing.

Foundational work in social perspectives on wellbeing may be traced to Thoreau's (1993) writings on the obligations of government in society, Nietzsche's (1989) work on social morals, Schweitzer's (1987) reverence for life, de Beauvoir's (2011) assessment of the social error

promoting gender opposition, Watt's (2011) focus on present centeredness, Berger and Luckman's (1966) experience-based understanding of reality, Friere's (2017) call for access to education, and Bateson's (1972) work to refine the understanding of individual and social systems' mutual and interdependent influence. Since the turn of the century, many new thinkers have contributed to the insights on social systems including Putnam (2000) in defining the social changes that have resulted in a loss of community, hooks (2001) in supporting the interrelation of community and personal life, Greene (2013) in defining socially responsible inclusiveness, Wilson (2014) in describing the meaning of social experience, Harari (2015) in extrapolating a comprehensive history of human existence, and Stanley (2018) in describing the patterns that strip society of democracy. The writings, old and new, have offered insight into improving individual, family, and social constructs within the scope of Natural Systems Theory. To further understand how exchanges between individual, family, and society may unfold, a review of transactional analysis may prove helpful.

Transactional Analysis

The origin of transactional analysis may be credited to Berne's (1964) work on the interactions and games that a person may use to manipulate another habitually and without any awareness of the transaction occurring. These games are built into social dialogues, and may feed off biased short-cuts in thinking such as the permanence of loss. The game *Kick Me* mimics the crab in a barrel effect of never being able to win, or rise above the din of mundane existence. The thought process of permanent loss predicts that getting ahead is not possible and therefore failure is viewed as imminent. Thus, a self-fulfilling prophecy is created based on biased perceptions that may have social origins of support.

The concepts of stroking, ego states, and game analysis are also important parts of transactional analysis. First, stroking may be described as recognition that promotes esteem and wellbeing. Stroking has been reinterpreted in various ways such as in the Satir Model to rebuild self-esteem (Satir et al., 1991), in childhood development to grow and nurture healthy relationships (Erikson, 1973), and to generate hope through a process of internalized and externalized personalization (Seligman, 2006). Second, ego states were defined by Berne (1964) as ways of organizing and synthesizing behavior, thoughts, and emotions into child, adult, or parent mindsets. James and Jongeward (1996) built on the transactional analysis concepts while combining them with Gestalt Therapy approaches. Schwartz (1995) added depth to the parts of self in his contribution of Internal Family Systems Therapy. Third, game analysis was defined by Berne (1964) as transactions with predictable patterns and outcomes enacted based on hidden motives. Harris (2004) built on the concepts of transactional analysis to create I'm Okay-You're Okay, a book that explained the various positions and dialogues that could be used to structure interactions. Steiner (1974) worked closely with Berne in developing transactional analysis, and additionally contributed solutions for rewriting negative scripts that insufficiently define personal meaning. With intention, positive scripts can be written and exercised to improve life's experiences.

Through the processes of awareness, dialogue, and processing, transactional analysis may create second order change that improves experiences authentically (James & Jongeward, 1996). Research on the use of group transactional analysis in the treatment of addiction has been shown to improve psychological health and addiction recovery (Etemadi-Chardah et al., 2017). Recently published work demonstrated group transactional analysis improved self-esteem for incarcerated women (Torkaman et al., 2020). A second recent study showed evidence that individual

transactional analysis combined with hypnotherapy resolved emotional conflicts that residually remained after problem focused therapy had been completed (Bahrami & Heidari, 2021). To more fully understand how the parts of self systemically and individual function internally and externally, a strong understanding of physiological and cybernetic theory may be beneficial.

Physiological and Cybernetic Approaches

Physiological polyvagal engagement may restrict emotional responses, and physical behaviors with predictable outcomes (Porges, 2011). The impact of the autonomic nervous system on emotions and affect has been linked to certain behaviors and physical responses that may positively influence social engagement, mobilization, play, and immobilization without fear, or negatively result in immobilization with fear. In recent research, Kolacz et al. (2019) further explored how autonomic nervous system emotional states may lead to gastrointestinal symptoms and illness, as well as offered therapeutic interventions for improving wellbeing. Poli et al. (2021) presented research that demonstrated mindfulness practices increased vagal tone and parasympathetic activity while reducing symptoms of post-traumatic stress disorder and obsessive-compulsive disorder. The vagal system may be trained to engage in relaxation through mindfulness (e.g.: Dana, 2018; Khazan, 2019), through controlled breathing (e.g.: Childre & Martin, 1999; van der Kolk, 2014), or through meditation (e.g.: Lake, 2009; Tarrant, 2017). To some extent, the internal workings of the body may be understood as predictable processes with consistent outputs based on inputs. The logic of predictable machine-like behavior may also be applied with success onto the interactions people experience through the theory of cybernetics.

Cybernetics began as a venture to understand human knowledge through a process of categorization undertaken by Andre-Marie Ampère in the early part of the nineteenth century (Cybernetics, 1953). Ampère's foundational contributions were in part based on his

philosophical leanings that defined realities tangibly with causation, akin to the electrodynamic theory that he established in 1826 describing the energy flow of electromagnetism (Caneva, 1980). Electrodynamic interactions rely on similar frequencies to attract and achieve interactions, similar to mutual attraction described in Natural Systems Theory DoS (Bowen, 1994).

The electromagnetic phenomenon of image production within diagnostic radiology may provide a practical illustration of like-energy attraction. To capture images with x-ray, similar atomic number inner shell electron binding energies within the body will interact with similar frequencies of ionizing radiation passing through (Carlton, Adler, & Balac, 2020). It is the similarity of the energies that attract interactions. If the relative atomic number for bone is approximately 12.8, then an x-ray beam between 45 to 110 kilovoltage peak would produce an interaction that results in the average energy range of 14.85 to 36.3 kiloelectrovolts. The law of attraction based on similars allows for the energy exchange. With too high of an energy, the radiation passes through without capturing detail for an image. With too low of an energy, all the energy is absorbed in the tissues resulting in too little information for an image. The process may be defined by its interdependence of causation in interactions.

The beauty of interdependent and mutually responsive relationships noted in the study of the electromagnetic spectrum may also be applied theoretically in other natural systems.

Cybernetics (1953) is defined by the phenomenon of circular causality. Ampère initially described cybernetics as a method of *steering the ship* to direct flow of energy within a system. Similar to the electrodynamic theory, the theory of cybernetics relies on a system of inputs and outputs that are responsive to the changing environment.

Responsive to the changes in technology during the twentieth century, cybernetics was applied by Wiener (1961) to understand human communication through an analogic comparison

with computers. Through Wiener's popularized work, cybernetics has gained transdisciplinary applications that continue to offer insight into how systems function successfully, or with entropy leading to the system's demise. With respect to cybernetics, families may demonstrate the circular causality of emotive energy flow in the nuclear family emotional system, multigenerational transmission, and through parental projection (Kerr & Bowen, 1988).

Cybernetics may be used in other social exchange arenas to predict and master navigation in workplace communication (Chaaban et al., 2021) or improving patient care through the analysis of feedback loops (Ozbolt et al., 2004). The circular causality systems approach compliments theoretical work in family systems (e.g.: Kerr & Bowen, 1988; Watzlawick et al., 2011), and leads to introspection at the molecular level and as an individual.

At a cellular level, or as an individual, concepts of circular causality may be applied to increase the understanding of internalized exchanges. Offering insight into the molecular interactions of the mind, Lowenstein (2013) explored how information processing occurs at the cellular level applying quantum mechanics to explain the interactions of thought and cognition. As energy may move as a particle or a wave in quantum theory, interactions may be traced based on similarities of energy exchanges. Maltz (2015) revised applications of cybernetics to be applied onto self-image, creating therapeutic techniques for visualization and relaxation that may help an individual take command of the process of circular causality through intentionally direct steering of the ship.

Joining physiological response with circular causation, Goldstein and Kopin (2017) completed a review of the applications cybernetics and the autonomic nervous system theories have taken over the last century-and-a-half. In summary of their review, they recommended a merger of the sciences to improve treatment and prevention of neurodegenerative disorders. At a

social systems level, Smith and Henning (2019) reviewed cybernetic applications in work environments, and suggested that commitment and reliability in social exchanges is key to success. Through cybernetic theory, research has shown the impact that inputs and outputs have in the regulation of circular causality in systems. The basic health of an organism, or an organization, is dependent on the ability for the entity to achieve a homeostatic environment that maintains wellbeing. Exploration of the habits that contribute to individual and community health may also be purposely reviewed through the lens of Natural Systems Theory.

Health Habits

The health habits that maintain homeostasis for an individual include nutrition, sleep, exercise, self-regulation, moral-rational development, and the limitation of toxins. A balance of health choices that provide stability for the body and mind may also support the spirit (Kabatznick, 1998). Holistic mind-body-spirit alignment may be considered the epidemy of health. In Natural Systems Theory, the highly differentiated individual may find they are "able to assume total responsibility for self and sure of his responsibility to others, he does not become overly responsible for others" (Kerr & Bowen, 1988, p. 107). Becoming responsible for oneself, and one's choices with compassionate discernment for self and others may be an aspirational zenith of the differentiation process.

Nutrition

The nutritional food options for maintaining health are varied, and perhaps somewhat baffling and unclear for many to decipher who have easy access to a full range of choices. Lake (2009) suggested nutritional questions may be useful to include on intakes with clients to capture an understanding of potential deficiencies that may contribute to mental and physical wellness. Burrows et al. (2017) reported in a study of college students that a moderate to high positive

correlation was demonstrated between healthy diets and academic achievement. In a similar study, Chawla et al. (2019) reported breakfast consumption was correlated with improved academic performance based on a study of 68 undergraduate dental students. In studies by Reuter et al. (2020) as well as Reuter and Forster (2021) positive correlations were found between healthy nutritional choices and academic performance for young adult learners.

Nutrition is vital for all ages of individuals to obtain, and provides a path to holistic wellbeing (Kabatznick, 1999). Nutritional deficiencies may predispose individuals to mental and neurological disease processes (Owen & Corfe, 2017). Adan et al. (2019) presented an overview on the current needs for research focused on nutrition. They suggested a gap exists in the empirical evidence of nutritional causality and underlying mechanisms of action for mental health management.

Sleep

The impact of sleep on mental health has received significant attention in research since the mid-twentieth century's discovery of rapid eye movement and non-rapid eye movement as part of sleep cycles (Aserinsky & Kleitman, 1953). Recent research has included the effects of sleep on academic performance (Chen & Chen, 2019; Gomez-Fonseca & Genzel, 2020; Hershner, 2020; Ho et al., 2022; Reuter & Forster, 2021), the impact of sleep on self-perceived memories (Azza et al., 2022), and the long-term effects on mental health related to sleep deficiencies for adolescents (Wang et al., 2021). A meta-analysis of polysomnographic correlations between mental illnesses and sleep also provided interesting suggestions for future research and clinical treatments (Baglioni et al., 2016). Sleep has been evidenced as an important factor to manage for wellbeing, and may be improved further through exercise.

Exercise

Exercise and sleep are interrelated, and contribute jointly to improved wellbeing. Dolezal et al. (2017) presented a systemic review on the benefits of exercise on sleep indicating all forms of exercise have positive correlations with sleep, especially for individuals managing chronic disease. Villadsen et al. (2021) reviewed the effects of exercise, sleep, nutrition, and alcohol consumption on mental health during COVID-19 and reported that the risk for sleep disturbances remains high as pandemic restrictions ease. The lack of exercise, insufficient sleep, and inadequate nutrition were all strongly correlated with decreased mental health during the height of the pandemic. Alcohol demonstrated a weaker correlation of risk to mental health and wellbeing than the other three reported factors.

Exercise may provide an increase in physical and emotional wellbeing. Mikkelsen et al. (2017) suggested exercise improves wellbeing through physiological, biochemical, psychological, and anti-inflammatory process. Mood disorders may be managed more effectively with regular exercise added to a treatment regimen. Chen et al. (2017) reported that chronic exercise increases cortisol similar to chronic stress. Unlike the outcomes experienced under chronic stress, the cortisol released during exercise appears to elevate dopamine in the prefrontal cortex resulting in improved mood and wellbeing. The increased sense of wellbeing and improved mood may enhance the enactment of self-regulation.

Self-regulation

Self-regulation may be experienced with greater ease at higher levels of self-differentiation (Bowen, 1994). An interesting study by Park et al. (2019) reported that increased cognitive and emotional self-regulation was positively correlated with retention and persistence of students in undergraduate STEM programs. Additionally, the increased use of humor as a coping strategy for chronic stress was reported to have a significant negative impact on

underrepresented minority students' grades. Self-regulation may be considered a life skill that increases resiliency, and promotes the development of coping strategies that improve the long-term achievement of goals.

Moral-Rational Development

Goal setting and achievement may also be interpreted as a sign of a highly self-differentiated individual. Kerr and Bowen (1988) stated, "A person who functions in the 85-95 range is principle-oriented and goal-directed" (p. 106-107). The qualities of being principled and seeking out reasonable challenges may contribute to an individual's long-term wellbeing and development. Forisha and Forisha (1976) suggested, "if a man is basically good, a supportive setting may be provided in which he learns to create his own approach to life and his own ethical system. If man is rational, one develops a system that appeals to his reason" (p. 21). Being of rational mind and body may allow individuals to seek out truth, and find meaningful experiences in everyday opportunities.

Finding meaning in everyday occurrences may be easier with an open heart, mind, and intention to seek out that which may be defined as moral-rational and good. In contrast, the challenges of life may be daunting, causing a temporary sense of loss in self. De Beauvoir (2018) wrote:

The explorer knows that he may be forced to withdraw before arriving at his goal; the scientist, that a certain phenomenon may remain obscure to him; the technician, that his attempt may prove abortive; these withdrawals and errors are another way of disclosing the world. Certainly a material obstacle may cruelly stand in the way of an undertaking: floods, earthquakes, grasshoppers, epidemics, and plague are scourges; but here we have on of the truths of Stoicism: a man

must assume even these misfortunes, and since he must never resign himself in favor of any *thing*, no destruction of a thing will ever be a radical ruin for him; even his death is not an evil since he is man only insofar as he is mortal; he must assume it as the natural limit of his life, as the risk implied by every step. (p. 87-88)

Perhaps the knowledge that all things are possible, in season and with love, provides the strength and foresight needed to weather the worst and be grateful for the rest (*King James Bible*, 2017, Ecclesiastes 3:1).

Limitation of Toxins

Toxins in a natural environment degrade, corrupt, and may lead to recoverable damage, permanent change, or death of the homeostatic ecosystem. Toxins in the human body follow a similar course, as do toxins at the cellular level (e.g.: Sowa-Rogozińska et al., 2019). Minimizing the intake and exposure to toxins is a rational and well-informed decision in respect to wellbeing.

Foods may contain toxins such as the skin of chicken or eggs (e.g.: Emmanuel et al., 2020), fruits and vegetables (e.g.: Corrias et al., 2020), as well as grains (e.g.: TatahMentan et al., 2020). The human body may also produce toxic effects from sugars (Freeman et al., 2018), and alcohol (Michalak et al., 2021).

Abuse of alcohol and drugs has been reported in recent research studies as a significant risk factor for decreased wellbeing, and deterioration of academic performance (Meda et al., 2017; Reuter & Forster, 2021; Wallis et al., 2019). The frequent consumption of alcohol has also been reported as negatively correlated with academic success and grade point averages (Meda et al., 2017; Souza et al., 2019). Finding avenues of enjoying food and drink while valuing the mind, body, and spirit are warranted to meet the needs of managing anxiety. Applying

compassion as a criterion in making judgements toward self and others may increase the wherewithal an individual experiences in asserting healthy choices.

Compassion

The principle of compassion may be described as an essential part of human existence that permits the flow of love between self and other. Compassion also invites and accepts honesty and truth. Satir (2009) stated, "Maybe one of the kindest things we can do for ourselves at this moment is to take a look at everything we believe in and ask ourselves if it really fits or if it's something we were told should fit" (p. 80). Compassion overturns shame, and points out the truth that the system of rules, should and should nots, as well as the adopted projections of childhood are often make-believe and changeable (Dyer, 2012; Gilbert, 2004; Kerr & Bowen, 1988). Compassion may encourage an individual to look to others for support while fostering the inner drive toward self-differentiation, acceptance, and intention for something better.

Recent research on compassion has investigated the reciprocal nature of the exchange in social interactions between infants and caregivers (Hoehl & Markova, 2018), the protective factor compassion offers to young adults in avoiding isolation due to excessive self-reliance (Choo & Marszalek, 2019), and the positive correlation between self-compassion and negative emotion differentiation (Galili-Weinstock et al., 2019). Compassion has been reviewed as a protective factor that limits anxiety, synchronous with social engagement and deeper insights into personal development. Although compassion may buffer individuals from the negative effects of anxiety, stress, and depression, many other factors may contribute to the development of mood disorders.

Factors of Anxiety, Depression, and Stress

The factors that contribute to organic mood disorders are varied including, but not limited to, acute pathology, chronic illness, and the adverse effects of drugs (Rundell & Wise, 1989).

The ways in which an individual manages stress, anxiety, and symptomology may often be traced to multigenerational projections learned in the nuclear family (Kerr & Bowen, 1988).

Regardless of the predecessing cause, mood disorders present as a significant public health concern with many available treatment options (Datta et al., 2021; Rakofsky & Rapaport, 2018).

Recent literature has largely supported the benefits of improved intrapersonal reflection and self-concept. In studies by Shahar (2020) and Viana et al. (2018) emotional clarity and awareness improved patient outcomes for participants experiencing social anxiety and post-traumatic stress disorder respectively. Maladaptive patterns of awareness may inversely increase mood disorders (Evans et al., 2019; Hallion et al., 2019; Hart et al., 2019; Kreifelts et al., 2019), and increase the likelihood of self-harm (Taylor et al., 2019).

Research on childhood trauma has found major depressive disorder may commonly result from sexual, physical, or emotional abuse (King, 2021). Post-traumatic stress disorder may more likely derive from sexual or physical abuse, as well as maternal battering. Generalized anxiety disorder has been linked with physical or emotional abuse, as well as maternal battering. As a child grows into adolescence, self-competence has been reported to be negatively correlated with depression (Vannucci & McCauley Ohannessian, 2018). Also, the comorbidity of depression, social anxiety, and loneliness have been reported as interrelated but distinguishable in adolescence (Danneel, 2019).

In adult-based participant populations, research has demonstrated similar results with a negative correlation between self-esteem and mood disorders (Tujil et al., 2020). Additionally, Dixon et al. (2020) reported intrapersonal reflection and acceptance may reduce the negative

cycles of rumination occurrences in the default mode network. Shu et al. (2021) suggested that strategies for changing mood disorders vary with anxiety responding better to situational change, and depression responding better to interventions that target emotional change. Toolan et al. (2019) reported worrying and self-criticism were linked in a study of generalized anxiety disorder. A common underlying aspect of research on mood disorders has suggested awareness of emotions may be beneficial to clients, and improve treatment outcomes.

Differentiation of Emotions

The skill to differentiate between emotions may increase with an awareness of self, inherent to the DoS process (Kerr & Bowen, 1988). In particular, research has shown that the increased ability to differentiate between negative emotions may buffer individuals against mood disorders (Galili-Weinstock et al., 2019; Lazarus & Fisher, 2021; Nook et al., 2021; Seah et al., 2020). Inversely, in a study by Willroth et al. (2019) depression increased with reduced negative emotion differentiation. The benefits of learning to differentiate between difficult emotions has been shown to improve long-term outcomes, suggesting that self-monitoring may be a useful skill for clients with mood disorders to adopt (Erbas et al., 2019; Widdershoven et al., 2019). Increased self-monitoring may expand an individual's capacity for holistic perception.

Perception

Perception of experiences can be manipulated through focusing, generalizing, selection, avoidance, interruption, and other exercises of awareness (Stevens, 2007). Reactions based on perception like disgust may be derived from a physiological olfactory response, but also may be reliant on social learning (Kavaliers et al., 2018). Individuals may develop greater awareness of emotional regulation to improve interactions and wellbeing (Williams et al., 2018). Awareness of

how and why perceptions evolve may increase the intrapersonal and interpersonal dynamics of relationships.

The ability to perceive multiple viewpoints and options in situations has been described in Natural Systems Theory as an advanced state of differentiation (Bowen, 1994). Pursuing self-development toward increased perception may be a daunting task in that an acceptance of uncertainty is a prerequisite (e.g.: Bateson, 1972). Self-affirmation and self-esteem have been demonstrated through recent research to improve the acceptance of uncertainty (Gu et al., 2019). Boss (2006) suggested people can learn to manage how they respond when faced with ambiguity, including during traumatic situations of loss. Other methods of self-development that may promote an expansion in acceptance of the unknown include looking inward for a connection to something greater than the externalized self (Jung, 1995).

Finding a connection to root oneself to may be beneficial for intrapersonal development (Kabat-Zinn, 1990). McLaren (2010) recommended a process of grounding to remain present focused and centered while expanding one's scope of perception. McLaren stated:

Grounding is also an excellent way to connect yourself to the world around you. Grounding certainly heals you, but it can also heal your relationships, your family, and your community by making you more conscious of yourself, your thoughts, your feelings, your behavior, and your environment. (p. 132)

Intrapersonal development to enhance perception may achieve part of the growth toward greater DoS. The intentional thoughts and actions to utilize what is learned through enhanced perception may help round out the experience of intrapersonal self-development.

Intention

Intention creates experiences, energizing thoughts into action (Watts, 1973). Therapeutic intentions have been presented in review by Schwartz (2017) with limited metaphysical empirical support, but tangible potential exists, nonetheless. Across a vast landscape of ideas, thoughts may be planted for later harvest. Ideas spring eternal, not just hope as Alexander Pope suggested in 1732 (Nuttal, 1984). The individual's struggles to express intention, overcoming a sense of existential dread in being mistaken (Solomon et al., 2015), or simply recovering from insecurity (Adler, 1956) may prevent intentional action.

An individual may need to dig deep for bravery and self-acceptance to exert their internalized intention (Satir, 1988). Robert Rodriguez (1995) described how he began his film career surrounded by doubt, needing to cast aside negative self-talk and intentionally move forward to reap results:

There are so many creative people out there itching to make something, but they're too negative in thinking they'll never get anywhere, or it'll never happen. I know all that stuff because I believed the same thing for too long. So get on with it and call me when you're done. You make the movie, and I'll bring the popcorn. Until then...all the best. Work hard and be scary. (p. 209)

Perhaps more optimism is needed for growth in many pursuits. Seligman (2006) reminded his readers that pessimism balanced optimism in our ancestors' Pleistocene brain to enable survival. As our lives and technologies have evolved significantly since that time, an intentional approach that moves toward optimism may serve humankind with greater efficiency. The greater efficiency of intention may be sought out through DoS as described in Natural Systems Theory (Bowen, 1994).

Summary

Many contributing theories and practices, as well as significant research from a variety of disciplines inform Natural Systems Theory (Bowen, 1994). The literature review included the investigation of scholarly writing, culturally impactful prose, and empirical research of myth, existentialism, mindfulness, perception, compassion, depression, anxiety, stress, health habits, intention, and the differentiation of emotions. Also reviewed were therapeutic approaches that focused on methods in experiential-Gestalt, multigenerational-Natural Systems Theory, social perspectives, transactional analysis, cybernetic, and physiological therapies. Together these concepts create a strong basis for reference in analysis of the current study that will focus on exploring adult undergraduate students' experiences of anxiety and self-differentiation evaluated through the DSI-R (Skowron & Schmitt, 2003), and the potential impact the test subjects may have experienced in being introduced to concepts of DoS (Bowen, 1994) on their academic performance.

Based on the available research to date, this author has found no available research that directly investigates the relationship between DoS, anxiety, and adult learners in an undergraduate program related to academic performance. The pilot study presented is meant to humbly address this gap, exploring possible outcomes that emerge related to academic success.

Chapter Three: Methodology

Research Question

The purpose of the study is to investigate a singular question: Will a brief psychoeducational introduction to the processes and meaning of "self differentiation" within the context of a small group of students be sufficient to produce an increase in self-differentiation and a corresponding reduction in anxiety related to academic performance?

Participants

A total of 14 students were recruited from Northwestern Health Sciences University in Bloomington, MN from a pool of 37 undergraduate Radiologic Technology students (three males, 11 females). Students in the Radiologic Technology program were selected for inclusion in this study because the program requires a high level of professionalism, is academically rigorous, and this researcher has a strong understanding of the curriculum expectations. The study was completed between September 2021 and December 2021. The students had diverse academic histories (no previous college experience to previously completing a graduate program), and socioeconomic backgrounds between the ages of 18 and 51 years (M=27.36). 42% of the students reported being less than 25 years of age. 21% of the students reported being firstgeneration college students. 90% of the students were White, 7% African American, and 3% of the students did not disclose an ethnicity. 12 of the 14 students completed the study with seven assigned to the test-group, and seven assigned to the control-group. Two control-group participants left the study prior to completion due to withdrawal from the Radiologic Technology program. Students who completed the study received their choice of a small cash stipend or gift card for their participation in the research. Approval was granted by the Institutional Review

Boards at Mount Mercy University in Cedar Rapids, IA, and at Northwestern Health Sciences University in Bloomington, MN.

Measures

The participants completed the Differentiation of Self Inventory-Revised (DSI-R) at the beginning and at the end of the study (Skowron & Schmitt, 2003). The survey questions were ranked through a Likert-type scale in which 1 means *not at all true of me* and 6 means *very true of me*. After the first administration of the survey, participants were randomly divided into two groups: a test-group and a control-group. The control-group was only asked to complete the two DSI-R surveys. The test-group completed the two DSI-R surveys, and attended a five-hour "workshop" conducted by Dr. Bill Forisha and this author. Data concerning demographic information was collected with the final DSI-R survey for both groups. Additionally, midterm and final grades of the participants were reviewed for possible correlations with permissions granted by the Custodian of Records, the College of Health and Wellness Dean, of the Radiologic Technology program at Northwestern Health Sciences University.

Procedures

The pre-survey test scores, pre-midterm grades, and final grades among those in the control-group were analyzed to ascertain the relevancy of Bowen's (1994) theory to the present study. Pre-survey test scores, pre-midterm term grades, post-survey test scores, and final grades among those in the treatment group were analyzed to ascertain the efficacy of the treatment applied for helping students manage performance anxiety, and usefulness of Natural Systems Theory in small non-familial groups.

Within the workshop, participants had the opportunity of learning more about the meaning of "self-differentiation" by comparing and contrasting strategies for managing anxiety

that they may have psychosocially inherited from the experiences of growing up within their particular family and/or culture of origin (Bowen, 1994; Kerr & Bowen, 1988). Activities consisted of lectures (e.g.: Becker, 1975), creation and discussion of multigenerational family "genograms" (e.g.: McGoldrick et al., 2008), structured mindfulness exercises (e.g.: Stevens, 2007), and group discussions about academic performance anxiety (e.g.: Whitaker & Bumberry, 1988). Although participants were invited to disclose content of a personal nature, they were advised that in no way they were required to do so. Invitations for self-disclosures were of the kind and variety very often utilized in the clinical training of counseling psychology and marriage and family graduate students. Both workshop conductors made similar disclosures in order to demonstrate the content and meaning of the material being examined.

The Survey

The Differentiation of Self Inventory-Revised (DSI-R) (Skowron & Schmitt, 2003) survey consisted of 46 statements that discern emotional reactivity (ER), I-position (IP), emotional cutoff (EC), and fusion with others (FO) through a Likert-type scale. Items were forward-scored and reverse-scored to measure differentiation of self to promote survey integrity. Sample statements include, "I usually do not change my behavior simply to please another person", and "When one of my relationships becomes very intense, I feel the urge to run away from it". The ER and IP statements measured emotional regulation and DoS. The FO and EC statements measured comfort within intimate relationships and DoS. The statements and subscales have previously been tested by Skowron et al. (2009) through confirmatory factor analysis. Permission was granted by Dr. Skowron to utilize the DSI-R survey (Skowron & Schmitt, 2003) as part of the research through email communication with this author.

Participants Protections and Rights

The consent was reviewed with participants in small groups prior to the start of the research, and time given for a full review of the consent form, immediate questions, and ongoing questions during and after the research was completed. The study involved three activities that may have put participants at risk. First, all subjects in the study were asked to complete a survey that identified personal and family concerns near the beginning and near the end of the research. Although, responses to the questionnaires were treated as confidential information, deliberating on such matters may have evoked uncomfortable emotions such as sadness, fear, and anger. Second, subjects in the treatment group had an opportunity to explore and develop skills to mitigate anxiety while participating in a five-hour psychoeducational workshop focused on the nature and origins of anxiety and the acquisition of anxiety management skills. Deliberating on personal implications of otherwise didactic material was encouraged. Third, such deliberations may have also evoked uncomfortable emotions such as those previously mentioned.

Participation in this study was voluntary. A decision to participate or not to participate, or to discontinue participation, did not affect any participant's or potential participant's current or future relations with Northwestern Health Sciences University and/or Mount Mercy University.

All gathered data was alpha-numerically coded and stored without personal identifiers present.

Personal identifiers linked to alpha-numeric codes were stored in an encrypted file to ensure data confidentiality.

Summary

The methodology for the research centered on a test-group receiving a brief psychoeducation session, and the test- and control-groups completing the DSI-R (Skowron & Schmitt, 2003) surveys near the beginning and near the end of the term prior to the

administration of final exams. The hypothesis based on Bowen's (1994) Natural Systems Theory predicted that DoS would be enhanced, anxiety would lessen, and academic performance would improve for the test-group, but not the control-group.

Research and Exploratory Hypotheses

Research Hypothesis 1

The primary hypothesis entertained for the study suggests that students who gain an increased awareness of DoS through a psychoeducation workshop, will actively develop coping mechanisms that improve performance anxiety, and in turn, improve their academic performance.

To test the primary hypothesis, a simple ANOVA will be applied to compare mid-term and final grades.

Research Hypothesis 2

The secondary hypothesis investigated in this study predicts that students with lower DoS, and who do not participate in the psychoeducation workshop, will not alter coping mechanisms to effect academic performance or anxiety.

To test the secondary hypothesis, a simple ANOVA will be applied to compare mid-term and final grades.

Exploratory Hypothesis 1

Students without active intervention (as part of the control-group) may experience greater anxiety, and be at a higher risk for program failure or withdrawal.

To examine the exploratory hypothesis 1, a review of term completion will be investigated comparing the test- and control-groups in term persistence based on raw percentages.

Chapter Four: Results

Data Collection

The pilot study investigated if a brief psychoeducational workshop that explored the processes and meaning of "self differentiation" within the context of a small group of students would produce an increase in self-differentiation and a corresponding reduction in anxiety that may be correlated with improved academic performance. The population for the study consisted of 37 adult undergraduate students that were invited to voluntarily participate in the research study at the start of the Fall Term, 2021. The 37 students represented four cohorts of students within the Radiologic Technology program.

The students were completing lecture classes in either a high-flex, blended environment, or online learning environment with COVID-19 restrictions in place to increase safety for the students, staff, and faculty. The study description was presented to the students verbally in class either through the online classroom or in person. Consent forms were given to all students to review who had an interest either as an electronic form, or paper form. The consent forms were also made available as downloadable electronic documents to all students in the online version of the classes' platform.

Of the population, 14 of the 37 students initially volunteered and completed the consent to participate in the study. The 14 students who volunteered were each given a unique alphanumeric identifier to maintain confidentiality throughout the data collection process. The 14 participants were divided into two groups by writing the alphanumeric identifiers on paper, and randomly drawing the first seven to select the test-group participants. The remaining seven were assigned to the control-group.

A statistician was recruited and utilized for completion of the ANOVA statistical analysis tests. The statistician also collaborated with this author to provide additional interpretation and composition of the tables presented within the research.

Demographics

The demographics for the study were collected with the post-survey prior to final exams being administered. The seven test-group participants completed the workshop, pre- and post-surveys, and the demographic survey. Of the seven control-group participants, two withdrew from the program after completing the pre-survey. One of the seven control-group participants completed both pre- and post-surveys, but chose not to complete the demographic survey. Four of the seven control-group participants completed the pre- and post-surveys, and the demographic surveys.

The limited number of students created a high degree of overfitting. This overfitting devalued the statistical analysis. The coefficient matrices show the relationships between the variables of the test- and control-groups. Ethnicity, gender, and first-generation demographics were not included in the ANOVA data presented because there was not a significant difference in those variables. Instead the raw data with corresponding numbers and percentages representing a summary of the demographics has been included in Table 3.

Using an ANOVA single factor assessment, Table 1 reviews the reported ages of participants in the test- and control-groups. Participants ranged in age from 18 to 51 years. The test-group participants had a total variance of 162 with an average age of 29. The control-group participants had a variance of 3 with an average age of 24. Table 2 reviews the between group and within group variations. The within group data had a greater range than the between group averages.

Table 1: Participant Age Variance

Anova: Single Factor				
SUMMARY				
Groups	Count	Sum	Average	Variance
Test	7	204	29.14286	162.1429
Control	4	97	24.25	2.916667

Table 2: Participant Age Comparison Between and Within Group

ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	60.93831	1	60.93831	0.558721	0.473852	5.117355
Within Groups	981.6071	9	109.0675			
Total	1042.545	10				

Table 3: Participant Gender, First Generation College Student Status, and Ethnicity

Frequency	Number	Percentage (%)
Distributions		
Male	3	21
Female	11	79
First generation college student	3	21
African American or Black	1	7
Caucasian or White	10	90

Statistical Analysis

To complete a statistical analysis of the data presented, an analysis of variance was selected. The independent variables for the purpose of this study were identified as the DoS with scores in areas of EC, ER, IP, and FO. The dependent variables to be reviewed in the first phase of the study were identified as the resulting final grades. Using an ANOVA, a causal comparative relationship may be assessed between DoS and final grades. Below Table 4 demonstrates final grades through a single factor ANOVA. Table 5 demonstrates the differences

between the groups' final grades. The P-value is not significant, and the null hypothesis is not rejected based on this data (a value ≥ 0.05).

Table 4: Participant Grade Variance

Anova: Single Factor				
SUMMARY				
Groups	Count	Sum	Average	Variance
Test	7	621.93	88.84714	48.49156
Control	5	433.94	86.788	30.71282

Table 5: Participant Grade Comparison Between and Within Groups

ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	12.36687	1	12.36687	0.298861	0.596584	4.964603
Within Groups	413.8006	10	41.38006			
Total	426.1675	11				

In evaluating I-position both matrices (the test- and control-groups) show a high correlation between initial and ending "I" position, reactivity, cutoff, and fusion values. The change in "I" position values had the highest correlation in both groups: in the positive direction for the test-group, and in the negative position for the control-group. Table 6 demonstrates the single factor ANOVA for I-position with significant results ($P \ge 0.01 < 0.05$), rejecting the null hypothesis.

The data on the left represents the pre-survey completed early in the term prior to the workshop that the test-group participants attended. The *P* value pre-survey was 0.04 with an average test-group I-position of 44.1. The average control-group I-position pre-survey was 36.1.

The data on the right represents the post-survey completed late in the term prior to final exams being completed, and after the test-group completed the workshop. The *P* value post-

SS

205.5403

439.6905

645 2308

df

11 39.97186

Source of Variation

Between Groups

Within Groups

Total

P-value

1 249.9429 6.790871 0.026223 4.964603

10 36.80571

survey was 0.03 with an average test-group I-position of 45.9. The average control-group I-position was 36.6.

Anova: Single Factor Anova: Single Factor SUMMARY SUMMARY Groups Count Sum Average Variance Groups Count Sum Average Variance Test 309 44.14286 56.80952 Test 321 45.85714 40.80952 217 36.16667 19.76667 Control 183 36.6 Control ANOVA ANOVA

Source of Variation

Between Groups

Within Groups

Total

SS

249.9429

368.0571

618

P-value F crit

1 205.5403 5.142125 0.044493 4.844336

Table 6: Summary of IP ANOVA

Table 7 demonstrates a single factor ANOVA between groups and within groups comparing the I-position. Both groups had slight gains in I-position with the test-group gaining 1.9 points, and control-group gaining 0.5 points on average. The P-value was 0.53, and is not significant. The null hypothesis may not be rejected based on this data (a value ≥ 0.05).

Table 7: Summary of IP Comparison Between and Within Group

Anova: Single Facto	r					
SUMMARY						
Groups	Count	Sum	Average	Variance		
Test	7	12	1.714286	11.57143		
Control	5	3	0.6	3.8		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	3.621429	1	3.621429	0.42792	0.527768	4.964603
Within Groups	84.62857	10	8.462857			
Total	88.25	11				

The independent variables of ER and FO remained stable in the pre- and post-survey evaluations through the single factor ANOVA. Average ER *P* value pre-survey was 0.24 and

post-survey 0.22. Between and within variable ER P value was reported at 0.55. Average FO P value pre-survey and post-survey was 0.97. Between and within variable FO P value was reported at 0.44. The P-values for ER and FO are not significant. The null hypothesis may not be rejected based on this data (a value \geq 0.05).

The independent variable of EC presented with interesting results in review of the shift that was reported for the control-group in the post-survey. Below in Table 8 EC test- and control-group data may be reviewed. The test-group EC averages remained static at 51.7. The control-group EC averages jumped from 42.2 to 47.4. Average EC P value pre-survey was 0.19, and post-survey 0.54. Between and within variable FO P value was reported at 0.36. The P-values for EC are not significant. The null hypothesis may not be rejected based on this data (a value \geq 0.05).

Table 8: Summary of EC ANOVA

SUMMARY					SUMMARY			
Groups	Count	Sum	Average	Variance	Groups Count	Sum	Average	Variance
Test	7	362	51.71429	83.90476	Test 7	362	51.71429	66.90476
Control	6	253	42.16667	238.1667	Control 5	237	47.4	239.8

Research Hypothesis 1

Research hypothesis 1 states students who gain an increased awareness of DoS through a psychoeducation workshop, will actively develop coping mechanisms that improve performance anxiety, and in turn, improve their academic performance. To test the hypothesis, an ANOVA was applied to compare mid-term and final grades. The P value was reported at 0.68. The P-values for the test-group grade change between midterm and final are not significant. The null hypothesis may not be rejected based on this data (a value \geq 0.05). All students maintained or improved overall scores from midterm to final within the test-group with differences of \pm 0.1 to \pm 3.38. Table 9 presents the data for the test-group midterm to final grade changes in summary.

Source of Variation

Between Groups

Within Groups

SS

7.8037202

446.13857

df

ANOVA: Single Test-Factor Test Group Difference Midterm Final **SUMMARY** 87.29 1.24 86.05 Groups 93.1 0.1 Count Sum Average Variance 93 **Test-Scores** 7 612.05 87.435714 45.618929 74.2 74.62 0.42 Test-Difference 7 9.88 1.4114286 1.5742476 86 87.9 1.9 93.1 93.38 0.28 93 95.56 2.56 90.08 86.7 3.38 ANOVA

Table 9: Summary of Test-Group Comparison of Midterm to Final Grade

Research Hypothesis 2

F

0.174917

P-value

0.684618

F crit

4.9646027

MS

10

7.8037202

44.613857

Research hypothesis 2 states students with lower DoS, and who do not participate int the psychoeducation workshop, may not alter coping mechanisms to effect academic performance or anxiety. To test the hypothesis, an ANOVA was applied to compare mid-term and final grades. The P value was reported at 0.77. The P-values for the control-group grade change between midterm and final are not significant. The null hypothesis may not be rejected based on this data (a value \geq 0.05). In review of the raw data, two students improved their overall scores from midterm to final ranging from +2.48 to +6.43. Three students dropped their total scores ranging from -0.68 to -2.07. The data was inconsistent in proving the hypothesis correct. The contrast and split of some control-group participants improving academic performance while others declined in academic performance may hold a space for future study or consideration. Table 10 demonstrates the increase and decrease of the control-group final grades from the midterm grades.

Table 10: Summary of Control-Group Comparison of Midterm to Final Grade

ANOVA: Single								
Factor	Control							
						Midterm	Final	Difference
SUMMARY						86.75	86.07	-0.68
Group	Count	Sum		Average	Variance	95.25	94.03	-1.22
Control-Scores	5		429	85.8	43.10625	81.5	79.43	-2.07
Control-								
Difference	5		4.94	0.988	12.21257	78	84.43	6.43
						87.5	89.98	2.48
ANOVA								
Source of								
Variation	SS	df		MS	F	P-value	F crit	
Between Groups	0.5229343		1	0.5229343	0.0897036	0.7706868	4.9646027	
Within Groups	58.295766		10	5.8295766				

Exploratory Hypothesis 1

The exploratory hypothesis 1 states students without active intervention, the participants of the study who acted as part of the control-group, may experience greater anxiety and be at a higher risk for program failure or withdrawal. To examine the exploratory hypothesis 1, a review of term completion was examined comparing the test- and control-groups through term persistence based on numeric values and raw percentages. This review will not apply the statistical analysis ANOVA as the data is valuable without inferential interpretation, and stands as a useful source of data in its raw form. Table 11 shows the control-group, test-group, and joined sample's rates of completion for each phase of the study, as well as withdrawal from the Radiologic Technology program.

Table 11: Raw Data on Participant Completion

Participant Group	Number (%) Completing Consent and First Survey	Number (%) Completing all Assigned Aspects of Study	Number (%) Completing all But One Aspect of Study	Number (%) Withdrawn from Term and Program
Control-Group (out of 7)	7 (100%)	7 (100%)	0 (0%)	0 (0%)
Test-Group (out of 7)	7 (100%)	4 (57%)	1 (14%)	2 (29%)
Total (out of 14)	14 (100%)	11 (79%)	1 (7%)	2 (14%)

Summary

The data presented with limited significant results in IP for both groups, and unpredicted results in EC for the control-group. The exploratory hypothesis 1 led to a possibly important finding in student retention. Together these results may be reviewed to extrapolate possible implications, as well as the future direction that research may embark upon.

Chapter Five: Discussion and Implications

Procedures and Method

The primary objective of the research study was to investigate if a brief psychoeducation workshop will improve coping while reducing anxiety and improving academic performance within a small group of undergraduate students. Using Natural Systems Theory (Bowen, 1994) as the theoretical model, experiential-Gestalt practices (e.g.: Perls et al., 1994) as a basis for intervention, final grades as a measure of academic success, and the DSI-R (Skowron & Schmitt, 2003) as the survey tool, the methodology was formed.

The population that the sample was drawn from was small, a total of 37 students. Of the total population, 38% of the students volunteered. The beginning sample size was 14 students that completed the consent and the initial DSI-R survey. The 14 students were randomly divided into two groups of seven to be either part of the control- or test-group. The seven test-group participants completed all aspects of the study they were given. Four of the seven control-group participants completed all aspects of the study they were asked to complete. Two of the seven control-group participants left the study, and withdrew from the program.

The test-group participated in a five-hour workshop that was designed to manipulate the independent variable, DoS, to improve academic outcomes. Based on the Natural Systems

Theory, individuals who increase differentiation will experience more comfort with stress, and have a reduction in anxiety (Bowen, 1994; Kerr & Bowen, 1988). The workshop covered topics including the nature and universality of anxiety (e.g.: Becker, 1975), strategies to manage anxiety, Gestalt exercises to explore I-position statements (Stevens, 2007), and several other concepts to draw awareness to coping strategies while offering an opportunity to gain additional insights into personal scripts that may contribute toward self-development.

The inferential statistical analysis chosen for the study was the ANOVA. The DoS was selected as the independent variable, and student grades the dependent variable to address the primary research question. Using the P value to determine significance, results were reviewed with the understanding that significant results ($P \ge 0.01 < 0.05$) would reject the null hypothesis.

Research hypotheses were also explored in the study to check for possible influences that being selected for the test-group may have had on the participants. Research hypothesis 1 inquired if the test-group would demonstrate greater DoS, coping, and grade outcomes with lower anxiety. The ANOVA was applied to research hypothesis 1 along with descriptive statistics. Research hypothesis 2 explored if control-group participants may demonstrate lower DoS, coping and grade outcomes with higher anxiety. The ANOVA was applied to research hypothesis 2 along with descriptive statistics to extrapolate meaning. Exploratory hypothesis 1 asserted that being in the study while not being part of the test-group may put students at higher risk for anxiety and withdrawal. Descriptive statistics without inferential testing were used to review exploratory hypothesis 1.

Findings

Results from the pilot study offered some insights into the potential of psychoeducation as an avenue for increasing coping and academic performance while reducing anxiety. First, the IP evaluation demonstrated significant results through a single factor ANOVA for I-position with P=0.04 pre-survey, and P=0.03 post-survey ($P\ge0.01<0.05$), rejecting the null hypothesis. The change in IP values had the highest correlation in both groups. IP was positively correlated in the test-group. IP was negatively correlated in the control-group.

Second, the other DoS survey items did not demonstrate significant results on the single factor ANOVA test. ER and FO remained stable for both the test- and the control-group. EC

evaluation demonstrated stability in the test-group, and a 5.2 average increase in the control-group. The control-group's increase represents a nearly 12% jump in reported EC survey scores within the research time frame.

Third, the research hypotheses 1 and 2 did not provide significant results through the single factor ANOVA measure. Research hypothesis 1 contended that students who gain an increased awareness of DoS through a psychoeducation workshop, will actively develop coping mechanisms that improve performance anxiety, and in turn, improve their academic performance. Participants in the test-group remained static in their academic performance measures, or trended slightly up. Research hypothesis 2 contended students with lower DoS, and who do not participate int the psychoeducation workshop, will not alter coping mechanisms to effect academic performance or anxiety. Participants in the control-group demonstrated mixed results in their academic outcomes with two students increasing, and three students decreasing overall scores.

Fourth, the exploratory hypothesis 1 stated that students without active intervention, and participation as part of the control-group, may experience greater anxiety, and be at a higher risk for program failure or withdrawal. Of the seven control-group participants, two left the study and withdrew from the Radiologic Technology program.

Discussion

The results from the research were mixed with evidence to support the validity for further study. The manipulation of the test-group had significant results on IP shown as a positive correlation for the test-group, and negative correlation for the control-group. This may be supportive of the contention that differentiation is directly related to an individual's ability to remain flexible, adaptive, and effectually responsive under stress (Kerr & Bowen, 1988). The

positive correlation of the test-group supports the contention. As Watts (2011) suggested, "the undivided mind certainly has the feeling of freedom, and certainly brings into the moral sphere a way of life which has all the marks of free and creative action" (p. 126).

The negative correlation for the control-group raises questions of a possible confounding variable related to how the survey was completed, average age of the control-group, or other unknown variable. Due to COVID-19 restrictions, classes were mixed with some students attending online, and others on-ground dependent on health concerns. The variability of how the survey was received and completed may have impacted the reported results. Bowen (1994) postulated that the average person reaches their adult DoS state by age 25. As the average age of the control-group was 24, compared to the test-group average of 29, this may have unintentionally impacted the results.

The remaining three measures of differentiation did not demonstrate significant results. Relationships with ER and FO remained stable for each group. Significant change in either category was not expected as people tend to remain at similar levels of differentiation for the majority of their adult life (Bowen, 1994). The EC measure went up by approximately 12% for the control-group. Like the IP change for the control-group, the results suggested a confounding variable may not have been accounted for such as the delivery of the survey electronically, the implicit pressure to perform at a higher level than what may have represented a current evaluation, or other variable. Changes in the structure of the survey process may be modified to gain greater control by future researchers.

Although the research hypotheses 1 and 2 as written did not produce significant results, the outcomes showed some support for the strategies engaged in the research. The test-group participants maintained or improved their academic standing by the end of the test period. In

contrast, the control-group had two participants leave the program, three participants drop in academic standing, and two participants improve their academic standing. In a side-by-side comparison, the test-group showed greater stability, and resiliency to complete the term successful in comparison to the control-group.

The exploratory hypothesis that suggested students without the additional support were of higher risk for failure or withdrawal was strongly supported by the results with 28% of the control-group leaving the Radiologic Technology program during the term. Freire (1990 suggested those who did not have support may "only begin to develop when, surmounting the contradiction in which they are caught, they become *beings for themselves*" (p. 134). Choi et al. (2019) reported that a lack of support was a primary factor of student departure. Perhaps a well-designed brief psychoeducation workshop may be an avenue to overcome the barriers that hold learners back, and increase academic resiliency that may be measured through persistence, retention, program completion, and graduation.

Implications for LMFTs and the Field of Marriage and Family Therapy

Working with student groups may be approached similarly to family interventions with the understanding of Natural Systems Theory's posits on individuality and togetherness (Kerr & Bowen, 1988). A group's functioning may be influenced by the group protocols and directives, as well as the individual's ability to follow the protocols and directives given. If an individual is not equipped to follow the direction, the individual may fail. If the individual fails without redirect, the group may be negatively impacted. In a recent study by Oliveira-Silva et al. (2021), it was reported that the primary individual barriers to success in a medical health nursing program were correlated with low socioeconomic status, disrupted curriculum flow, and student age at or above 22 years. Students may need to have programming receptive to their

responsibilities outside of school to promote a student's education as the focal point for ongoing support.

Building esteem and self-worth related to I-position may serve as an important phase of personal development to engage in greater acumen towards self-differentiation (Bowen, 1994).

Jirdehi et al. (2018) reported positive correlations between academic self-esteem, grade point average, and global self-esteem. The circular causality of esteem-grades-esteem may be observed in relating to where a student is at in the larger education system.

Encouraging the active accrual of skills that build self-worth alongside the necessary knowledge to be successful may lessen the student's risks of withdrawal and increase engagement. Applying the knowledge of Natural Systems Theory (Bowen, 1994) as a therapist to guide the process of esteem building may additionally serve to lessen the gap. As James and Jongeward (1996) suggested, when you know how to win at the game of life self-esteem becomes anticipated as an inherent right. With a winning attitude of graciousness and gratitude, hunches may be derived flexibly with creativity abundant to change direction as needed in the pursuit of goals.

Following hunches as a therapist may be based on intuition informed by rationalism (e.g.: Bowen, 1994). The rationality to understand where a person may be coming from may be best understood through a dynamic theory that embraces the diversity of experiences, circular causation, meaning making, and the many influences that impact perception. The Natural Systems Theory is well suited to embrace individuals and systems to allow for growth and development (Kerr & Bowen, 1988).

The growth of a human body may be described as developing in a linear path with birth, entropy, and death tracking the course of an individual's existence. Paradoxically each person

also exists in a spiritual, unconscious plane that Einstein described as spacetime, a nonlinear course of here and now (Lorentz et al., 1952). Additionally, Einstein described the nature of matter and energy as being able to change form with no beginning or end. The matter of the human body may not be the permanent housing of the human essence of the soul. The matter and energy of the soul may be seen as transient, and able to shift from what is perceived as life into what is perceived as death. The soul may be the permanent, infinite part of life that shifts form. Through the soul, the human experience is created to move through life with joy, harmony, and purpose.

The infinite soul may be tuned into and harmonized with the temporary parts of human existence, the body and mind (e.g.: Chopra, 2004; Dyer, 2012). The body and mind may represent the ego and personality. The ego and personality develop in their own transient way through the roles assigned internally and externally (e.g.: Foucault, 2006). Through the awareness of choice, we may maximize the union of body, mind, and soul.

A person's physical existence of the body and mind is understood well through objective logic that may be relatively straightforward to categorize, and order. A person's spiritual existence may be understood through subjective interpretation that often defies logic, and may be a source of creativity (Bowen, 1994).

Embracing the paradoxical and opposites' natural states with loving understanding may create long-term balance, and peace in the present. A common struggle a person may encounter when defining existential meaning may be naming the source of love, and the opposite of love. Commonly one may say the opposite of love is hate. From a literal, semantic sense this may be accurate. As an experiential cause, love and hate are not opposites. Love can become hate. Hate can become love. Love and hate are capable of synchronous experience.

The root cause of love may be described as compassion. Compassion for self may lead to compassion for others (e.g.: Satir, 2009). Compassion for self and others may create love. Love therefore may have root cause of compassion.

In contrast, hate's root cause may be described as fear. Fear leads to self-doubt. Self-doubt may support polyvagal sympathetic responses while rational thinking becomes muddled or suppressed (e.g.: Porges, 2011). Sympathetic nervous system responses enact fear.

Hate enacted may be the opposite of love. Hate enacted may be defined as fear.

Compassion enacted therefore may be the opposite of hate. Love enacted may be defined as compassion.

Compassion has the potential to evanesce hate, as it respectfully approaches hate without judgement (i.e.: tyranny of shoulds, Horney, 1991). Compassion opposes hate while recognizing its place, value, purpose, and existential meaning. Hate serves as a survival mode of the ancestral brain to escape when afraid (e.g.: Dana, 2018). Hate may be summarized as an outdated mode of survival for modern day-to-day life. Love and compassion for self and others, not hate and fear, may promote a healthy means to exist in a paradoxical state of mind-body-spirit while cycling through environments dependent on circular causation for homeostatic existence to promote wellbeing and minimize anxiety through deep pragmatism (Greene, 2013).

Limitations

The limitations of the research may be linked to the small sample size and the mixed process of collecting data in both online and in-person classroom environments. With a total pool of 37 candidates, the sample was limited with 14 volunteers. Overfitting devalued the statistical analysis due to the small sample size. The limitations of the online class environments added to a lack of control in administering surveys with blended teaching formats. Although some

candidates were able to attend in person, others attended classes online only. Surveys were administered and collected based on student availability during COVID-19 restrictions that affected campus classroom attendance. Supervision and direct assistance during survey administration was not as consistent in the online environment as in the in-person environment.

The measures taken to review the data once collected were collected were applied through ANOVA testing. Due to homogeny in the groups, multifactor analysis was not pursued. The use of multifactor analysis through inferential testing in a larger sample size may provide interesting results.

Procedures and Methodological Recommendations

The research may be improved through accessing a larger pool and sample to acquire a greater number of participants. Perhaps a larger group that represents multiple disciplines of study would be a better fit for testing the research question, and the hypotheses presented.

Acquiring a larger sample may also homogenize the mean age of participants between the test-and control-groups which may add value to the results. Additionally, with a larger sample size, the MANOVA could be utilized successfully to present multifactor comparisons that may shed additional insight on the topic.

Future Research

Several avenues may be beneficial to pursue in future research. First, applying Natural System Theory concepts to other academic groups may be beneficial. Seeking out adult learners in multiple contexts of high-school completion, trade and technical school certificate programs, as well as undergraduate and graduate school may be useful to understand the supports needed for academic success. Second, expanding the research to other groups that have disparities in gaining access to services may be appropriate such as individuals in recovery groups, released

inmates seeking to avoid recidivism, and community groups struggling to keep their communities safe. Third, future research may be applied to workplaces to improve staff retention, improve workflow, and increase the wellbeing within workplace cultures.

Summary

In conclusion, the potential for expanded use of Natural Systems Theory through an experiential-Gestalt approach is promising. The research results demonstrated some support for the application of psychoeducation as a tool to reduce anxiety. The pilot study may guide opportunities for future research to improve where the present study was unable to produce results due to the limitations of the sample size and data collection processes.

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Appendix A: DSI-R

Answer each numbered statement on a scale of 1 to 6 where 1 does not apply to you, and 6 is very true of you. These are statements that review thoughts of yourself and relationships with others. If a statement does not apply to you at this time, answer how you would imagine it to apply to you if you were in the situation named (i.e.: married, without a parent, partnered, etc.). Answer honestly and accurately to the best of your ability.

	No	t				Very
	true	e				true
	at					of
	all					me
1. People have remarked that I'm overly emotional.	1	2	3	4	5	6
2. I have difficulty expressing my feeling people I care for.	s to 1	2	3	4	5	6
3. I often feel inhibited around my family	. 1	2	3	4	5	6
4. I tend to remain pretty calm even under stress.		2	3	4	5	6
5. I usually need a lot of encouragement f others when starting a big job or task.	rom 1	2	3	4	5	6
6. When someone close to me disappoints withdraw from them for a time.	s me, I 1	2	3	4	5	6
7. No matter what happens in my life, I ke that I'll never lose my sense of who I a		2	3	4	5	6
8. I tend to distance myself when people g close to me.	get too 1	2	3	4	5	6
9. I want to live up to my parents' expectation of me.	ntions 1	2	3	4	5	6
10. I wish that I weren't so emotional.	1	2	3	4	5	6
11. I usually do not change my behavior sit to please another person.	mply 1	2	3	4	5	6
12. My partner could not tolerate it if I wer express to them my true feelings about things.		2	3	4	5	6
13. When my partner criticizes me, it bother for days.	ers me 1	2	3	4	5	6
14. At times my feelings get the best of me have trouble thinking clearly.	and I 1	2	3	4	5	6
15. When I am having an argument with someone, I can separate my thoughts all the issue from my feelings about the pe		2	3	4	5	6

16. I'm often uncomfortable when people get too	1	2	3	4	5	6
close for me.	1			-		0
17. I feel a need for approval from virtually	1	2	3	4	5	6
everyone in my life.	1	-		'		
18. At times I feel as if I'm riding an emotional	1	2	3	4	5	6
roller-coaster.	1	-		'		
19. There's no point in getting upset about things	1	2	3	4	5	6
I cannot change.	1	-		•		
20. I'm concerned about losing my	1	2	3	4	5	6
independence in intimate relationships.	1	-		•		
21. I'm overly sensitive to criticism.	1	2	3	4	5	6
22. I try to live up to my parents' expectations.	1	2	3	4	5	6
23. I'm fairly self-accepting.	1	2	3	4	5	6
24. I often feel that my partner wants too much	1	2	3	4	5	6
from me.	1	-		-		
25. I often agree with others just to appease	1	2	3	4	5	6
them.						
26. If I have had an argument with my partner, I	1	2	3	4	5	6
tend to think about it all day.						
27. I am able to say "no" to others even when I	1	2	3	4	5	6
feel pressured by them.						
28. When one of my relationships becomes very	1	2	3	4	5	6
intense, I feel the urge to run away from it.						
29. Arguments with a parent or sibling can still	1	2	3	4	5	6
make me feel awful.						
30. If someone is upset with me, I can't seem to	1	2	3	4	5	6
let it go easily.						
31. I'm less concerned that others approve of me	1	2	3	4	5	6
than I am in doing what I think is right.						
32. I would never consider turning to any of my	1	2	3	4	5	6
family members for support.						
33. I often feel unsure when others are not	1	2	3	4	5	6
around to help me make a decision.						
34. I'm very sensitive to being hurt by others.	1	2	3	4	5	6
35. My self-esteem really depends on how others	1	2	3	4	5	6
think of me.						
36. When I'm with my partner, I often feel	1	2	3	4	5	6
smothered.						
37. When making decisions, I seldom worry	1	2	3	4	5	6
about what others will think.						
38. I often wonder about the kind of impression I	1	2	3	4	5	6
create.						
39. When things go wrong, talking about them	1	2	3	4	5	6
usually makes it worse.						
40. I feel things more intensely than others do.	1	2	3	4	5	6

41. I usually do what I believe is right regardless	1	2	3	4	5	6
of what others say.						
42. Our relationship might be better if my	1	2	3	4	5	6
partner would give me the space I need.						
43. I tend to feel pretty stable under stress.	1	2	3	4	5	6
44. Sometimes I feel sick after arguing with my	1	2	3	4	5	6
partner.						
45. I feel it's important to hear my parents'	1	2	3	4	5	6
opinions before making decisions.						
46. I worry about people close to me getting	1	2	3	4	5	6
sick, hurt, or upset.						

Note: The items for all of the subscales except the revised Fusion with Others subscale are from "The Differentiation of Self Inventory: Development and initial validation," by E. A. Skowron and M. L. Friedlander, 1998, *Journal of Counseling Psychology*, 45, p. 246. Copyright 1998 by the American Psychological Association. Reprinted with permission.

Appendix B: Permission to Use DSI-R

From: Elizabeth Skowron < eskowron@uoregon.edu>

Sent: Thursday, April 8, 2021 11:57 AM

To: Lauri Peterson < <u>lapeterson@nwhealth.edu</u>>

Subject: RE: DSI-R

Dear Lauri,

You are welcome to use the DSI-R in your research.

Good luck with your project...kind regards

Elizabeth A. Skowron, Ph.D.
Professor, Department of Psychology
Center for Translational Neuroscience
Past-President, UO Senate
University of Oregon
Eugene, OR 97403
http://ctn.uoregon.edu/
Tel. 541-346-9329



RELATIONSHIP BETWEEN

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Appendix C: Permission to Use Academic Records

July 7, 2021

To whom it may concern,

As the Custodian of Records for students in the Radiologic Technology program at Northwestern Health Sciences University and by this letter, I authorize the release of the Radiologic Technology student academic records to Lauri Peterson. These records are for use solely in connection with Ms. Peterson's proposed research on the Relationship Between Academic Performance Anxiety and Self-Differentiation.

Sincerely,

Dale Healey DC, PhD

(as Alan)

Dean – College of Health and Wellness

Appendix D: Consent Form

Social Science Research Consent Form

Relationship Between Academic Performance Anxiety and Self-Differentiation

You are invited to be in a research study on the efficacy of decreasing academic performance anxiety by participation in a small group designed to explore the psychological concept of "self-differentiation" on both an academic and personal level. Students in the Radiologic Technology program were selected for inclusion in this study because the program requires a high level of professionalism, is academically rigorous, and this researcher has a strong understanding of the curriculum expectations. We ask that you read this form and ask any questions you may have before agreeing to be in the study.

This study is being conducted by Lauri Wood, MS, R.T. (R)(ARRT), Assistant Professor of Radiologic Technology at Northwestern Health Sciences University, and doctoral candidate in the PhD Marriage and Family Therapy program at Mount Mercy University in Cedar Rapids, IA. This study is being undertaken in fulfillment of the remaining requirement in Professor Peterson's doctoral program, namely, her dissertation. Her dissertation advisor is Dr. Bill Forisha, Professor Emeritus of Antioch University: Seattle and an adjunct instructor at Mt. Mercy University in the MFT program. Dr. Forisha is a Licensed Psychologist, a Licensed Marriage and Family Therapist, and an MFT Board Approved Supervisor in Minnesota; he currently maintains a small private practice in the Twin Cities.

Background Information

The concept of "Self-differentiation" is the central concept of Natural Systems Theory--one of several schools of thought within the discipline of Marriage and Family Therapy. The concept refers to the lifelong process of maintaining a balance between two overlapping human processes: 1) being an individual and being a member of a group and 2) between cognitive functioning and emotional functioning. Furthermore, the theory posits that the challenge to maintaining a balance between these processes is itself determined by how much anxiety is experienced by a person and how well it is managed. Adults vary in their experience of anxiety and their learned ways of managing it. This variance may be at least partially accounted for by the multigenerational experiences of anxiety within each person's family of origin. Natural Systems Theory postulates that increasing an understanding of the above processes related to one's own individual and familial development will decrease the experience of anxiety as well as its debilitating consequences.

Purpose of the Study

The purpose of the study is to investigate a singular question: Will a brief psychoeducational introduction to the processes and meaning of "self differentiation" within the context of a small group of students be sufficient to produce an increase in self-differentiation and a corresponding reduction in anxiety related to academic performance?

Procedures:

If you volunteer to participate in this study, you will be asked to do the following: Complete a survey, called the Differentiation of Self Inventory-Revised (DSI-R) at the beginning and at the end of the study. The survey consists of 46 questions. After the first administration of the test, participants will be randomly divided into two groups: a test-group and a control-group. The control-group will only be asked to complete the two DSI-R surveys. The test-group will complete the two DSI-R surveys, and in addition will be asked to attend a five-hour "workshop" conducted by Professor Peterson and Dr. Forisha. Within the workshop, subjects will have the opportunity of learning more about the meaning of "self-differentiation" by comparing and contrasting strategies for managing anxiety that they may have "psychosocially inherited" from the experiences of growing up within their particular family and/or culture of origin. Activities will consist of lectures, creation and discussion of multigenerational family "genograms" (similar to family trees), structured mindfulness exercises, and group discussions about academic performance anxiety. Although participants may be invited to disclose content of a personal nature, they will be advised that in no way are they required to do so. That being said, invitations for self-disclosures will be of the kind and variety very often utilized in the clinical training of counseling psychology and marriage and family graduate students. Both workshop conductors will make similar disclosures in order to demonstrate the content and meaning of the material being examined.

Risks and Benefits of being in the Study

The study involves two activities that may put participants at risk. First, all subjects in the study will be asked to complete a survey that identifies personal and family concerns near the beginning and near the end of the research. Although, responses to the questionnaires will be treated as confidential information, deliberating on such matters may evoke uncomfortable emotions such as sadness, fear, and anger. Second, subjects in the treatment group will have an opportunity to explore and develop skills to mitigate anxiety while participating in a five-hour psychoeducational workshop focused on the nature and origins of anxiety and the acquisition of anxiety management skills. Deliberating on personal implications of otherwise didactic material will be encouraged. Such deliberations may also evoke uncomfortable emotions such as those previously mentioned.

The workshop conductors, Dr. Bill Forisha and the primary investigator, will be available to help subjects in the treatment group process concerns during and immediately after the workshop and during the following two weeks. The primary investigator, herself a therapist in training, will continue to be available thereafter as an academic advisor. If any subject in the study continues to experience uncomfortable emotions or exhibit disquieting behaviors in response to the research questions and/or the psychoeducational workshop, they may be encouraged to terminate their participation and may also be encouraged to seek mental health services. Referral sources will be made available by the primary investigator.

For subjects in the control-group, an opportunity to participate in a similar five-hour workshop will be offered after the research is completed; this will be led by the primary investigator.

The benefits to participation are education about the nature and origins of anxiety and about the importance of acquiring and mindfully using strategies to manage anxiety within both intimate and non-intimate environments—such as performance anxiety within an academic environment.

Compensation:

Each participant will receive a payment of \$15 for participation in the study at the completion of both sets of the survey questionnaires, DSI-R. If a participant does not complete both sets of questionnaires, no payment will be given.

If you are randomly selected for the test-group, you will also be part of a five-hour psychoeducation session, and receive an additional \$15 after all parts of the study are completed. For those in the control-group, you will have an opportunity *after* the research is complete to participate in a psychoeducation session to be scheduled at a later date. No additional payment will be made after the research study is completed.

Confidentiality:

The records of this study will be kept private. In any sort of report that will be read by others any information that would make it possible to identify a subject will be omitted or significantly disguised. Research records will be stored securely and only researchers will have access to the records.

Voluntary Nature of the Study:

Participation in this study is voluntary. A decision to participate or not to participate or to discontinue participation will not affect any participant's or potential participant's current or future relations with Northwestern Health Sciences University and/or Mount Mercy University. For instance, if you decide to participate in the study, you are still free to not respond to any particular inquiry or accept any particular invitation to participate in any particular activity during the study and you may withdraw at any time without affecting your relationships with the above institutions.

Contacts and Questions:

The researcher conducting this study is: Primary Investigator, Lauri Wood. If you have questions now or later, **you are encouraged** to contact the primary investigator at Northwestern Health Sciences University.

If you have questions or concerns regarding the study and would like to talk to someone other than the researcher(s), you may contact Dr. Linda Bowers, Human Subjects Committee chairperson, Northwestern Health Sciences University, 2501 W. 84th Street, Bloomington, MN 55431.

You will be given a copy of this information to keep for your records.

Statement of Consent:

I have read the above information. I have asked que to participate in the study.	stions and have received answers. I consent
Signature:	Date:
Signature of parent or guardian:(If minors are involved)	Date:
Signature of Investigator:	

Appendix E: Demographic Survey

Demographic Survey Information

What is your ethnic background?
What is your gender identity?
Are you a first-generation college student?
What is your age?
Who lives in your household with you?
Did your parent(s) graduate high school?
Did your parent(s) graduate college?
Stipend Preferences
Do you prefer a Target gift card, Amazon gift card, or cash?

Appendix F: Test-Group Raw Data Correlation Matrix

	Initial "I'	Initial Reactivity	Initial Cutoff	Initial Fusion
	Position	•		
Initial "I' Position	1	0.8657	-0.3542	0.6584
Initial Reactivity	0.8657	1	-0.3265	0.7813
Initial Cutoff	-0.3542	-0.3265	1	-0.4317
Initial Fusion	0.6584	0.7813	-0.4317	1
End "I" Position	0.8935	0.6496	-0.2970	0.4782
End Reactivity	0.8169	0.7808	-0.4938	0.8923
End Cutoff	-0.2317	-0.1819	0.7751	-0.4237
End Fusion	0.7940	0.8428	-0.1890	0.9196
"I" Position	-0.5377	-0.6983	0.2269	-0.5608
Change				
Reactivity	0.0449	-0.2034	-0.3080	0.2834
Change				
Cutoff Change	0.2291	0.2552	-0.4790	0.0830
Fusion Change	0.2271	0.0317	0.6448	-0.3404
Ethnicity	-0.2842	-0.2271	-0.1100	0.0100
Gender	-0.3496	-0.4692	0.5380	-0.3093
Age	0.2411	0.0056	-0.2239	0.4084
1st gen student	0.3546	-0.0268	-0.0729	-0.3671
Grade prior	-0.3696	-0.3991	-0.2008	0.0067
Final Grade	-0.4331	-0.4685	-0.0564	-0.1168
Grade Change	-0.4140	-0.4518	0.7678	-0.6843

End "I"	End Reactivity	End Cutoff	End Fusion	"I" Position
Position				Change
0.8935	0.8169	-0.2317	0.7940	-0.5377
0.6496	0.7808	-0.1819	0.8428	-0.6983
-0.2970	-0.4938	0.7751	-0.1890	0.2269
0.4782	0.8923	-0.4237	0.9196	-0.5608
1	0.6658	-0.3805	0.5824	-0.1019
0.6658	1	-0.5148	0.9101	-0.5598
-0.3805	-0.5148	1	-0.1773	-0.2011
0.5824	0.9101	-0.1773	1	-0.6655
-0.1019	-0.5598	-0.2011	-0.6655	1
0.1164	0.4529	-0.5471	0.2236	0.1192
-0.0665	0.0531	0.1834	0.0476	-0.6324
0.1786	-0.0892	0.6523	0.0565	-0.1677
-0.5621	-0.1576	0.3620	-0.0636	-0.4259
-0.4965	-0.2975	0.6860	-0.1273	-0.1578

0.1314	0.5664	-0.2348	0.4545	-0.2875
0.5090	0.0662	-0.1198	-0.1537	0.1702
-0.1022	-0.2509	-0.3526	-0.2944	0.6269
-0.1527	-0.3867	-0.1963	-0.3813	0.6728
-0.2971	-0.7956	0.8085	-0.5316	0.3594

Reactivity	Cutoff Change	Fusion Change	Ethnicity	Gender
Change				
0.0449	0.2291	0.2271	-0.2842	-0.3496
-0.2034	0.2552	0.0317	-0.2271	-0.4692
-0.3080	-0.4790	0.6448	-0.1100	0.5380
0.2834	0.0830	-0.3404	0.0100	-0.3093
0.1164	-0.0665	0.1786	-0.5621	-0.4965
0.4529	0.0531	-0.0892	-0.1576	-0.2975
-0.5471	0.1834	0.6523	0.3620	0.6860
0.2236	0.0476	0.0565	-0.0636	-0.1273
0.1192	-0.6324	-0.1677	-0.4259	-0.1578
1	-0.2809	-0.1850	0.0772	0.2033
-0.2809	1	-0.0969	0.6740	0.1160
-0.1850	-0.0969	1	-0.1776	0.4814
0.0772	0.6740	-0.1776	1	0.6455
0.2033	0.1160	0.4814	0.6455	1
0.8797	0.0222	0.0501	0.3512	0.4637
0.1419	-0.0530	0.5650	-0.4714	-0.0913
0.1764	-0.1775	-0.7214	0.0905	-0.2113
0.0626	-0.1850	-0.6157	0.0986	-0.1322
-0.6021	-0.0713	0.4664	0.0602	0.4037

Reactivity	Cutoff Change	Fusion Change	Ethnicity	Gender
Change				
0.0449	0.2291	0.2271	-0.2842	-0.3496
-0.2034	0.2552	0.0317	-0.2271	-0.4692
-0.3080	-0.4790	0.6448	-0.1100	0.5380
0.2834	0.0830	-0.3404	0.0100	-0.3093
0.1164	-0.0665	0.1786	-0.5621	-0.4965
0.4529	0.0531	-0.0892	-0.1576	-0.2975
-0.5471	0.1834	0.6523	0.3620	0.6860
0.2236	0.0476	0.0565	-0.0636	-0.1273
0.1192	-0.6324	-0.1677	-0.4259	-0.1578
1	-0.2809	-0.1850	0.0772	0.2033
-0.2809	1	-0.0969	0.6740	0.1160

-0.1850	-0.0969	1	-0.1776	0.4814
0.0772	0.6740	-0.1776	1	0.6455
0.2033	0.1160	0.4814	0.6455	1
0.8797	0.0222	0.0501	0.3512	0.4637
0.1419	-0.0530	0.5650	-0.4714	-0.0913
0.1764	-0.1775	-0.7214	0.0905	-0.2113
0.0626	-0.1850	-0.6157	0.0986	-0.1322
-0.6021	-0.0713	0.4664	0.0602	0.4037

Appendix G: Control-Group Raw Data Correlation Matrix

Initial "I' Position	1	0.5311	0.5768	0.2687
Initial Reactivity	0.5311	1	-0.2286	0.8127
Initial Cutoff	0.5768	-0.2286	1	-0.1965
Initial Fusion	0.2687	0.8127	-0.1965	1
End "I" Position	0.9374	0.6601	0.2690	0.3243
End Reactivity	0.5960	0.9730	-0.0729	0.7382
End Cutoff	0.5545	-0.2484	0.9964	-0.2464
End Fusion	0.3024	0.8130	-0.1657	0.9991
"I" Position	0.1295	0.5309	-0.6987	0.2409
Change				
Reactivity	-0.0270	-0.5780	0.6607	-0.6554
Change				
Cutoff Change	-0.3388	-0.1959	-0.1831	-0.5484
Fusion Change	0.2415	-0.6483	0.5757	-0.8148
Age	-0.2664	0.1306	-0.9083	0.1749
Grade prior	-0.5827	-0.4825	0.1999	-0.1154
Final Grade	-0.1080	-0.1803	0.5319	0.2101
Grade Change	0.9235	0.6205	0.4680	0.5500

End "I" Position	End Reactivity	End Cutoff	End Fusion
0.9374	0.5960	0.5545	0.3024
0.6601	0.9730	-0.2484	0.8130
0.2690	-0.0729	0.9964	-0.1657
0.3243	0.7382	-0.2464	0.9991
1	0.6651	0.2438	0.3530
0.6651	1	-0.0796	0.7392
0.2438	-0.0796	1	-0.2175
0.3530	0.7392	-0.2175	1
0.4668	0.3802	-0.7139	0.2371
-0.3010	-0.3740	0.7162	-0.6530
-0.3290	-0.0677	-0.0987	-0.5742
0.1292	-0.5786	0.5905	-0.7893
0.0381	-0.1406	-0.9216	0.1693
-0.8141	-0.3885	0.2235	-0.1341
-0.4096	-0.0672	0.5285	0.2089
0.8798	0.6233	0.4181	0.5832
"I" Position	Reactivity	Cutoff Change	Fusion
Change	Change		Change
0.1295	-0.0270	-0.3388	0.2415
0.5309	-0.5780	-0.1959	-0.6483

-0.6987	0.6607	-0.1831	0.5757
0.2409	-0.6554	-0.5484	-0.8148
0.4668	-0.3010	-0.3290	0.1292
0.3802	-0.3740	-0.0677	-0.5786
-0.7139	0.7162	-0.0987	0.5905
0.2371	-0.6530	-0.5742	-0.7893
1	-0.7883	-0.0765	-0.2453
-0.7883	1	0.5478	0.5590
-0.0765	0.5478	1	0.0891
-0.2453	0.5590	0.0891	1
0.8783	-0.8567	-0.5071	-0.2390
-0.8380	0.5648	0.2441	-0.1616
-0.8920	0.4865	-0.1151	-0.1859
0.1599	-0.2897	-0.6411	0.0087
"I" Position			
Change	Reactivity Change	Cutoff Change	Fusion Change
0.1295	-0.0270	-0.3388	0.2415
0.5309	-0.5780	-0.1959	-0.6483
-0.6987	0.6607	-0.1831	0.5757
0.2409	-0.6554	-0.5484	-0.8148
0.4668	-0.3010	-0.3290	0.1292
0.3802	-0.3740	-0.0677	-0.5786
-0.7139	0.7162	-0.0987	0.5905
0.2371	-0.6530	-0.5742	-0.7893
1	-0.7883	-0.0765	-0.2453
-0.7883	1	0.5478	0.5590
-0.0765	0.5478	1	0.0891
-0.2453	0.5590	0.0891	1
0.8783	-0.8567	-0.5071	-0.2390
-0.8380	0.5648	0.2441	-0.1616
-0.8920	0.4865	-0.1151	-0.1859
0.1599	-0.2897	-0.6411	0.0087
"I" Position	Reactivity	Cutoff Change	Fusion Change
Change	Change	catojj change	, asion change
0.1295	-0.0270	-0.3388	0.2415
0.5309	-0.5780	-0.1959	-0.6483
-0.6987	0.6607	-0.1831	0.5757
0.2409	-0.6554	-0.5484	-0.8148
0.4668	-0.3010	-0.3290	0.1292
0.3802	-0.3740	-0.0677	-0.5786
-0.7139	0.7162	-0.0987	0.5905
0.2371	-0.6530	-0.5742	-0.7893
1	-0.7883	-0.0765	-0.2453
-	5.7555	1 2.07.00	1 0.2 100

-0.7883	1	0.5478	0.5590
-0.0765	0.5478	1	0.0891
-0.2453	0.5590	0.0891	1
0.8783	-0.8567	-0.5071	-0.2390
-0.8380	0.5648	0.2441	-0.1616
-0.8920	0.4865	-0.1151	-0.1859
0.1599	-0.2897	-0.6411	0.0087

Appendix H: Workshop Flyer 11/6/2021



Welcome!

How you see yourself shapes what you become.

Part I~ 9:30am to 12:30pm

9:30 to 9:45am- Enjoy a beverage, light breakfast, pick up a gift bag, and look over the agenda. We look forward to your participation, and hope you find the experience meaningful.

- 1) 9:45 to 9:50am- Introduction to the meaning and purpose of the workshop agenda, and Dr. Bill Forisha as a presenter, educator, and practitioner.
- 2) 9:50 to10:45am- Presentation on the nature of anxiety, origin and universality of the phenomenon, and the necessity of creating strategies to manage it.
 - a) Cycle of Creativity
 - b) The Triangle of Wants
- 3) 10:45 to 11:05am- Gestalt exercises from John Steven's book *Awareness*: "I choose to" vs "I have to" and/or "I need" vs "I want," etc. Discussion of how we manage anxiety via language. Review of hand dialogue followed by parent-child dialogue.
- 4) 11:05 to 11:15am- Break.
- 5) 11:15am-12:00pm- Presentation on the crucible of learning, and the family of origin with a focus on Murray Bowen's work.
- 6) 12:00 to 12:30pm- Parent-child dialogue.
- 12:30 to 1:15pm- Lunch.

Part II~ 1:15 to 3:15pm

- 7) Introduce the concept of constructing a genogram with an example, and template provided. Discuss the origins of messages around pursuing an education from internal and external sources.
- 8) Expand the discussion to intentionally and explicitly explore the psychological motivations for academic success, and what strategies for managing anxiety might be present in your pursuit of academic success.

Most important question: Are the strategies you are employing meeting these minimal criteria:

- a) Do your strategies help you succeed in reaching your goals?
- b) Do your strategies not cause harm to anyone else (harm that cannot be mitigated via intentional conversation and negotiation)?

Thank you for your time and participation!

Workshop Presenters:

Bill Forisha, Ph.D., LP, LMFT, Board Approved Clinical Supervisor

he, him, his

Professor Emeritus, Antioch University: Seattle

Visiting Professor, American University in Cairo, Egypt, 2021-22 Academic Year

Director (On-leave) Mid-west Institute for Natural and Experiential Systemic Therapy (MI-NEST)

Lauri Wood, MS, R.T.(R)(ARRT)

Ph.D. Candidate of Marriage and Family Therapy at Mount Mercy University, Cedar Rapids, Iowa she, her, hers

Assistant Professor Northwestern Health Sciences University: Bloomington, MN