Relational Spirituality as a Foundation for Mindfulness, Self-Compassion and Love: Three Latent Profile Analyses on Mindfulness, Self-Compassion and Experiences of Love and Their Differential Associations with Spirituality, Psychopathology, Well-Being

Fabio Cezar de Souza Marcovski

Submitted in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy
under the Executive Committee
of the Graduate School of Arts and Sciences

COLUMBIA UNIVERSITY

2024

Abstract

Relational Spirituality as a Foundation for Mindfulness, Self-Compassion and Love: Three Latent Profile Analyses on Mindfulness, Self-Compassion, and Love and Their Differential Associations with Spirituality, Psychopathology, Well-Being

Fabio Cezar de Souza Marcovski

This dissertation examines and integrates three key constructs of human awareness—*mindfulness*, *self-compassion*, and *love*—into the relational context of *relational spirituality*. Relational spirituality concerns the ways in which we relate to the sacred or to the transcendent, as well as to the sacred in fellow human beings and in ourselves. We conducted a series three distinct empirical studies on profiles of *mindfulness*, *self-compassion*, and *love* and examined their differential associations with spirituality, well-being, and psychopathology. Although these ways of perception bear great significance to an interpersonal context, most prior research on these forms of perception occur at the level of the individual. Using person-centered techniques, our research shed light on how specific profiles compare across indices of mental well-being, spirituality, and thriving. In so doing, we aimed to advance a relational view that unifies these three constructs and that lifts them out of a one-person psychology towards a relational framework. We also reviewed and highlighted empirical advances on relational spirituality and provided a focused review on the intrapersonal and relational aspects of mindfulness, self-compassion, and love. Finally, we concluded by integrating and summarizing our three empirical studies in light of *attachment*, *differentiation*, and *intersubjectivity* while discussing their implications and significance for future research

Table of Contents

List of Tables

Acknowledgments

First and foremost, I thank my dissertation advisor, Dr. Lisa Miller, for her enthusiasm, her steadfast support, intellectual brilliance and irreplaceable charisma. Thank you for your constant inspiration and guidance along my doctoral journey.

Second, I thank all my doctoral peers at the Spirituality-Mind-Body Institute (SMBI) at Teachers College, with special gratitude to Clayton McClintock, Simon Choi, Micheline Anderson, Suza Scarola, Abigail Crete, Elisabeth Mistur, Thomas Ford, Joshua Lipson and Jason Reid. Without the vibrant consultations and collaborative research meetings, this work would not have come to fruition.

Third, I extend warmth and gratitude to former and present Directors of Clinical Training, Dr. Lena Verdeli and Dr. Doug Mennin, whose leadership, mentorship, and support gave me the necessary structure to always move forward.

Finally, I thank and acknowledge my wife, Viktoria, for her vibrant and indispensable support, and her ongoing love and company. I also extend my appreciation, gratitude, and love to my irreplaceable parents, mentors, teachers, grandparents, and peers. Thank you.

Dedication

Relational spirituality is the theme of this work, and informs who I dedicate this manuscript to. First, I dedicate it to all my grandparents, Cezar and Juventina, Augusta and Matias, whose boundless love, vibrant presence, and infinite compassion offered me, from my earliest days and from childhood onward, with the seeds with which to envision this research. Second, I dedicate it to my parents, whose kind guidance and vigorous support allowed me to grow into the human being I am now. Third, I dedicate it to my beloved wife, Viktoria, whose warmth infused me with inspiration, courage, and improved my thinking. Fourth, I dedicate it to our children, Sofia and Matias, who epitomize the point of this research, and who give me ongoing reasons for being an integral part of the unending Flow, of this great adventure called Life. To close, I hope this work inspires all fellow Brazilians who aspire to fulfill their intellectual, academic, and spiritual dreams.

Chapter 1: Introduction to and Conceptual Roadmap for the Three Empirical Studies

The scientific study of spirituality has boomed in recent years (Braam & Koenig, 2019; Rosmarin & Koenig, 2020), while empirical studies on religion and spirituality (R/S) have advanced greatly since the early ponderings of American pioneering psychologist William James (1902/2003). At present, researchers incorporate advanced empirical methods, including neuroscience and advanced brain imaging (e.g., Newberg, 2014; Rim et al., 2019), twin and genetics studies (e.g., Steger et al., 2011; Vance et al., 2010), and more sophisticated, multidimensional theories of spirituality (McClintock et al., 2019; Neff, 2006). In addition, meta-analyses and systematic reviews indicate that a strong, well-defined sense of spirituality is associated with positive life outcomes, including increased subjective well-being, enhanced quality of life (Shapiro et al., 2008), and improved mental and physical health outcomes (Garssen et al., 2021; Jim et al., 2015; Koenig, 2012, 2015). Although early debates in the field primarily focused on showing association and, potentially, causal link, recent longitudinal studies (e.g., Braam & Koenig, 2019) and accruing empirical evidence indicate several important mechanisms and causal factors implicated in the relationship between higher spirituality and improved health and mental health. These mechanisms include positive spiritual and religious coping (Abu-Raiya & Pargament, 2015; Ai et al., 2005, 2007), increased optimism (Salsman et al., 2005), enhanced meaning and purpose in life (Diener et al., 2011), greater prosocial tendencies, enhanced social integration, as well as a general worldview of interconnection (Cheadle & Dunkel Schetter, 2017).

Among the several definitions of spirituality developed over the years (for a comprehensive review, see Unruh et al, 2002), Hill and Pargament (2003) advanced one of the most widely embraced: “spirituality as the search for the sacred” (p. 65). Hill and Pargament (2003) defined “the sacred” broadly, inclusive of theistic and non-theistic worldviews, and encompassing “concepts of God, the divine, Ultimate Reality, and the transcendent” (p. 65), in whichever way an individual perceives the ultimate and transcendent. Relational spirituality builds on and extends the theory of such “search for the sacred” (Hill & Pargament, 2003 p. 65), and places it within a relational paradigm (e.g., Desrosiers & Miller, 2007; Hall, 2021; Sandage & Shults, 2022). Just as psychiatry and clinical psychology have gained from advancing a relational framework (e.g., Aron, 1990), the scientific study of spirituality, we argue, may be made richer by examining the quality, the nuances, and “the ways” (Shults and Sandage 2006, p. 161) in which individuals relate with the sacred. After all, even early definitions of spirituality, locating it within the individual, imply a relationality, since searching for implies an object, and a potential relationship with that which one considers sacred.

Relational Spirituality

Relational spirituality may be understood as “the ways we relate with the sacred” (Sandage et al., 2016). Despite such simplicity, several theories have been proposed to explain how individuals differ in relating with the sacred. For example, Tomlinson and colleagues (2016) summarized five primary approaches researchers have used to convey the meaning of *relational*: first, as a cognitive appraisal of “how one experiences being in relationship with the sacred” (p. 65, e.g., Davis et al., 2008); second, as “implicit relational representations” (p. 58, Hall, 2004, p. 67), akin to attachment processes, of the sacred with oneself and with others; third, as a contextual paradigm influenced by “the dynamics of spirituality in couples, family, and community" (p. 60, Chapman et al., 2021; Desrosiers et al., 2011; Desrosiers & Miller, 2007); fourth, as a worldview of social interconnectedness in which spirituality is "immanent within relationships between people" (p. 63); fifth, as a combined integration of *attachment, intersubjectivity,* and *differentiation* of the self in relation to the sacred (e.g., Sandage et al., 2020). Fundamentally, all such approaches emphasize that specific ways, attitudes, and approaches in which people relate to the sacred may be differentially associated with mental health, well-being, and with various psychosocial outcomes.

For example, examining relational spirituality within a theistic context, Davis et al. (2018) proposed two types of internal working models for "God representations": one *doctrinal,* focused on scriptural and conceptual understandings of God, and another *experiential,* implicit, and "affect-laden." Davis and colleagues (2018) emphasized that healthy spirituality expresses a convergence of and integration between doctrinal and experiential understandings of the divine. By contrast, some may experience a mismatch between their doctrinal understanding (e.g., "God is fair and loving") and their experiential perception ("life is unfair and harsh"). Davis and colleagues (2018) argue that such dissonance may lead to distress. Similarly, Beck and McDonald (2004) found evidence among theistic participants for distinct "attachment styles" toward God: some may be anxious, others avoidant, while others may report closeness and connection. More recently, Sandage and colleagues (2020) wrote about the contrast between spiritual *dwelling* [in the sacred], which refers to a sense of "commitment," "community," and "intimacy" (p. 52), with spiritual *seeking,* marked by "exploration," "openness" and "complexity" (p. 53). Taken together, spiritual "dwelling in" and spiritual "seeking," we argue, also highlight a relationality with the sacred.

Throughout the three dissertation studies that follow on mindfulness, self-compassion, and love, we build on the premise that relationality may underscore and be foundational to each of the core constructs examined individually and as a whole. Ultimately, we highlight ways in which our studies emphasize the inherent mutuality, integration, and synergy between how we relate with ourselves, how we relate to others, and how we relate with the sacred under the framework of relational spirituality. In the end, we examine the premise that the self, the other, and the ultimate or sacred, interrelate, and that *mindfulness*, *self-compassion*, and *love* may be also best understood from a relational approach.

Mindfulness: a Relational Perspective

Defined as "the awareness that emerges by paying attention on purpose, in the present moment, non-judgmentally" (Kabat-Zinn, 2013a, p. xxxv), mindfulness has become a crucial mental health construct, especially at a time when people report increased stress and anxiety associated with minds and societies that grow increasingly distracted. Meta-analyses and systematic reviews indicate that mindfulness reduces stress, depression, and anxiety (Blanck et al., 2018; Kabat-Zinn, 1990) and provides a host of physical health and mental health benefits (Grossman et al., 2004), increased prosocial behavior (Donald et al., 2019), improved emotion regulation and life satisfaction (Mesmer-Magnus et al., 2017). What about the practice and the attitude of mindfulness that might lead to these improved outcomes and to a better understanding of ourselves and of other people? Like spirituality (Delaney, 2005; Neff, 2006), mindfulness, we argue, may be best understood as a multidimensional and relational construct.

Among the most widely measures of mindfulness, the Five-Facet Mindfulness Questionnaire (FFMQ; Baer et al., 2008), assesses five distinct dimensions of mindfulness: *observing*, *describing*, *acting with awareness*, *nonreactivity*, and *nonjudging*. *Observing* refers to “noticing or attending to internal and external experiences”; *describing* refers to “labeling internal experiences with words”; *acting with awareness* refers to “attending to one’s activities of the moment” rather than being on “automatic pilot”; *nonjudging* refers to “taking a nonevaluative stance toward thoughts and feelings”; and *nonreactivity* refers to “allow[ing] thoughts and feelings to come and go, without getting caught up in or carried away by them” (p. 330; Baer et al., 2008). These five dimensions of mindfulness are considered complementary, and have been shown to be closely related to each other (Baer et al., 2006a). We reason that present-moment awareness and nonjudgment might also be extended from oneself towards another person, an object of awareness, toward a relationship, and to life in general. Indeed, with such a frame in mind, some scholars have recently come to embrace and to conceptualize mindfulness interpersonally.

Building on the associations between mindfulness and interpersonal empathy (e.g., MacDonald & Price, 2017), reduced social anxiety (Goldin et al., 2017), and increased relational well-being and satisfaction among couples (e.g., Barnes et al., 2007; McGill et al., 2016), Pratscher and colleagues (2019) recently developed a novel measure of *interpersonal* mindfulness. Specifically, Pratscher et al., (2019) elaborated on four distinct dimensions of interpersonal mindfulness: a. presence, b. awareness of self and others, c. nonjudgmental acceptance, and d. non-reactivity. The authors defined interpersonal mindfulness as “being mindful during interpersonal interactions” (p. 1057) and as “paying attention in the present moment while with another person, including being aware of internal experiences … and external experiences …” while “choosing to respond in a nonjudgmental way” (p. 1057). Although recent to emerge, this interpersonal approach to mindfulness has a longer and richer history, especially given the ethical and spiritual roots of mindfulness practice. Most scholars indeed agree that mindfulness has historical roots in spiritual contexts (Van Gordon et al., 2015), as early descriptions of mindfulness suggest the construct originated within Buddhist scriptures highlighting practices focused on “lucid awareness” and “clear comprehension” of one’s own body, feelings, mind, and phenomena in general with an underlying intention focused on “the overcoming of sorrow and lamentation” (Bodhi, 2013). On a related vein, following the effects of systematic mindfulness interventions and training, Greeson and colleagues (2011) found that changes in *spirituality* were a key mechanism for improvements in health outcomes and quality of life in participants. Similarly, Labelle and colleagues (2015), found that increases in self-reported mindfulness following mindfulness practice were associated with increases in spirituality and with post-traumatic growth among cancer patients. Combined, these overlapping findings linking mindfulness with spirituality even across secular programs suggest that those who learn to be focused on the present moment non-judgmentally may derive, at least in part, emotional and cognitive improvements thanks to a more interrelated and spiritual view of self, of other, and worldview. Perhaps underscoring mindfulness gains we find increased awareness of relationality and spirituality as well. Informed by such hypothesis, our first empirical study examined mindfulness side-by-side with spirituality, well-being, and psychopathology from a person-centered perspective to explore this hypothesis.

Self-Compassion: A Relational Perspective

Self-compassion has also gained significant momentum in the social sciences and psychological literature (Neff 2003a; Neff, 2003b). Defined as an attitude of self-kindness and nonjudgmental awareness concerning personal failures and shortcomings (Neff, 2003), self-compassion has been associated with many physical and mental health benefits (Ewert et al., 2021; Ferrari et al., 2019; MacBeth & Gumley, 2012; Phillips & Hine, 2021), including greater well-being and life satisfaction (Zessin et al., 2015), lower stress and psychopathology (MacBeth & Gumley, 2012), improved adaptive coping against adversities (Ewert et al., 2021), and generally positive health outcomes (Phillips & Hine, 2021). Like mindfulness training, self-compassion has also been incorporated into several clinical programs and interventions, including compassion-cultivation training (CCT; Jazaieri et al., 2013), compassion-focused therapy (CFT; Gilbert, 2009, 2014), and mindful self-compassion programs (MSC; Neff & Germer, 2013). As with mindfulness, self-compassion, we argue, might also be best examined through a relational, and potentially inherently spiritual, framework.

For example, recent neuroscience and fMRI studies indicate that similar underlying neural networks are implicated both in self-compassion and in empathy toward others (Longe et al., 2010). Significant associations have also been shown between self-compassion and healthy concern for other people (Gerber et al., 2015) and between self-compassion, perspective-taking, empathetic concern, and altruism (Neff & Pommier, 2013), which are all interpersonal, relational constructs. Growing empirical research also demonstrates that self-compassion is associated with more relational well-being, more secure attachment, constructive relationship repair behavior, and greater relationship satisfaction among families and couples (Lathren et al., 2021; Neff & Beretvas, 2013). However, to date, most prior research on self-compassion has been based on an intrapersonal, one-person approach. Our second research paper on profiles of self-compassion aims to address this limitation and to review self-compassion from a person-centered approach.

Among the first measures of self-compassion, Neff's (2003) self-compassion scale (SCS) continues to serve as the main reference in the literature. Neff's (2003) scale includes six aspects: *self-kindness,* c*ommon humanity*, and *mindfulness* in the positive group also known as compassionate self-responding (CSR), and *over-identification*, *self-judgment,* and *self-isolation* in the negative, uncompassionate self-responding (UCR) side. As these subscales indicate by name, a relational perspective is implicit in the measurement of self-compassion: experiencing pains and failures as part of our larger, shared humanity (*common humanity*), having present-moment-focused and awareness of oneself (as in relation to another; *mindfulness*) and cultivating an attitude of warmth, understanding, acceptance, and kindness (*self-kindness)* may all extendable from oneself to others. Besides, qualities such as *isolation* imply relationality. Our second study holds that all these self-compassion traits may be embedded in and applied in interpersonal, relational contexts. Given the shared neural network expressed in both interpersonal and intrapersonal expressions of self-assurance, self-compassion, empathy, and concern for others (Longe et al., 2010), self-compassion, we argue, may also be best understood through a relational framework. Thus, in our second empirical study, we examine profiles of self-compassion and examine their differential associations with well-being, spirituality, and psychopathology.

Subjective Experiences of Love as Quintessential Relationality

Love may be more nuanced and sophisticated a construct than mindfulness, self-compassion, and spirituality combined. It is no wonder philosophers, artists, poets and social scientists have long attempted to define, elaborate on, and quantify experiences of love, yet love has remained elusive and hard to measure. Though a number of theories and scales have recently emerged attempting to clarify open-ended questions about its nature, no ultimate winner has emerged. For example, might love be a combination of *intimacy*, *passion*, and *commitment* (Sternberg, 1986), or might it be an interpersonal *story*, a *narrative* couples and lovers hold that implicitly or explicitly determines the quality, roles, and nuances of their relationship (Sternberg, 1995)? Might there be a single type of love, or multiple types instead, such as *companionate* and *passionate* love (Hatfield, 1988), or, *romantic, passionate, affiliative, friendly, erotic*, and *playful* (Hendrick & Hendrick, 1986)? Typologies aside, might love be an *emotion* marked by "interpersonal resonance" and "positivity" as in the sharing of joy with another (Fredrickson, 2013; Fredrickson, 2016)? With lacking consensus, researchers still agreed that love may be multidimensional and the quintessential relational experience. Our research expands on this framework by examining love via a person-centered approach and by examining the differential associations thereof with mental health, spirituality, and well-being.

Building the theoretical framework for love, some, inspired by cognitive theories of natural language and conceptual prototypes (e.g., Rosch, 1973), developed a prototype-based approach and found that *companionate* love (as in *familial, parental, friendship-based*) emerged as the most central and prototypical aspect of love, while passionate love and infatuation are peripheral and secondary (Fehr, 1988; Fehr & Russell, 1991). Of course, *companionate* and *passionate* aspects of love take place in relationships and, therefore, may only be understood from a relational viewpoint. Others, instead, hoped to uncover, through an *essentialist* perspective of love, the necessary and sufficient conditions—the *essence*—of love. Using an essentialist perspective, Hegi and Bergner (2010) wrote that love necessitates and requires one's "investment in the well-being of another for his or her own sake" (p. 621). Altruism and caring concern, Hegi and Bergner (2010) argued, marks the *essence* of love. We find these to contain obvious relational attributes as well. Regardless of whether love is best understood via prototypes or an essentialist framework, love always emerges in relation to a beloved. Thus, and considering empirical research suggesting that love is associated to flourishing and well-being in intimate and close relationships (Graham, 2011), and that experiences of love are associated with higher quality of life (Oravecz et al., 2020), we hold that a relational framework to love is warranted.

Among the early scholars to examine love, Sorokin (1950, 1954) theorized love as multifaceted and as a social, psychological, ethical, and, essentially, a moral and spiritual experience. Sorokin advanced that, for some, love may be primarily focused on fulfilling one's own desires and pleasures ("biological love") while for others, love may encompass more nuanced dimensions and areas, including *social aspects* (e.g., friendships and relationships), *religious sentiments* (e.g., perceptions of and sentiments toward God or the transcendent), *ethical guidelines* (as in the moral way to be in the world), *ontological aspects* (as in the fundamental nature of life, humanity, and of the universe), and *psychological* aspects (as in feeling loved as a person; D'Ambrosio & Faul, 2013; Sorokin, 1954). Inspired by Sorokin's comprehensive definition and theory of love, Levin and Kaplan (2010) developed and validated a multidimensional measure of love that assesses these aspects of love outlined above, from "*biological*" to "*psychological*," from "*social*," to "*religious*."

Specifically, the Sorokin Multidimensional Inventory of Love Experience (SMILE; Levin & Kaplan, 2010) examines six dimensions, or experiences, love: *social* love, referring to feelings of acceptance and belonging to friends and a wider social community; *ethical* love, referring to the belief that love represents the "right" or moral way to act in the world; *ontological* love, referring to the belief that love marks the essence or the fabric of life, of relationships, and of the universe at large; *biological* love, referring to love for pleasure and for physical sensations; *psychological,* referring to feeling loved and embraced by others, and *religious* love, referring to feeling loved and accepted by a "Higher Power" or "God." Levin and Kaplan (2010) found that love aspects correlated with religiosity, spirituality, and religious commitment, all of which have been broadly associated with quality of life, mental health, and well-being (Garssen et al., 2021; Oman & Thoresen, 2005; Shapiro et al., 2008). Interestingly, this framework resonates with the wider theological and philosophical framework that regards love as a foundational aspect of religious and spiritual ethics and commitment (M. T. Lee et al., 2012; Post et al., 2002; Templeton, 1999). Our third empirical paper, focused on love, investigates how distinct dimensions, or facets, of love coalesce between and among large groups, and how such unique groupings, or profiles of love may be differentially associated with mental health, spirituality, and flourishing. In so doing, we aim to enrich and extend the field of love research in clinical psychology and spirituality with a more refined, relational perspective.

General Methods and Statistical Approaches Undertaken Across the Three Studies

Throughout our three studies, since all three constructs were multidimensional, we conducted a series of latent profiles analyses (LPAs) to examine the ways in which distinct dimensions of mindfulness, self-compassion, and love cluster across specific groups and subgroups in the population. As distinct profiles or groups of mindfulness, self-compassion, and love emerged, we examined their differential associations with indices of positive psychology and well-being, spirituality and religiosity, and psychopathology. Specifically, we conducted a series of ANOVAs using participants' most likely profile as the independent variable and continuous outcomes of interest as our dependent variables . First, our goal was to examine whether, across each of the multidimensional constructs of interests, meaningful and distinct groups, or profiles, were warranted by our data. We did so because the vast majority of prior studies have been variable-centered, and have largely ignored the possibility that meaningful and distinct groups of mindfulness, self-compassion, and love may be a part of the population at large. Second, we examined emerging profiles' differential associations with mental health, well-being, and spirituality, since only a tiny portion of studies have examined profiles of mindfulness, love, and self-compassion and then examined them via person-centered approaches such as latent profile analysis (LPA). For example, to the best of our knowledge, no prior studies have examined multidimensional experiences of love using latent profile analyses, none have compared profiles of self-compassion and mindfulness across indices of spirituality, and most have involved smaller samples than ours.

Person-Centered Statistical Approaches

Person-centered approaches such as latent profile analyses (LPA) have recently become more accessible and popular across clinical and social sciences at large. Encompassing techniques such as *mixture models*, *cluster analyses*, *latent class* and *latent profile* analyses, person-centered approaches allow researchers to form a nuanced understanding of groups and subgroups within large samples—hence why they are referred to as person-centered. Specifically, person-centered methods provide a data-driven approach to differentiate among qualitatively distinct subpopulations in a large sample (Howard & Hoffman, 2018; Woo et al., 2018). Thus, instead of assuming that all people emerge from a single, uniform population, as variable-centered methods such as correlations and regressions normally assume, person-centered analyses, as Morin, Gagné, and Bujacz (2016) put it, "relax this assumption and consider the possibility that the sample might include multiple subpopulations characterized by different sets of parameters" (p. 8). In turn, correlational and regression analyses assume that all individuals fit into a single, uniform, and "averaged" distribution, and that all people follow the same parameters (Morin et al., 2016). As a result, variable-centered techniques emphasize associations among constructs, instead of naturalistic distinctions among people and the ways unique constellations of people fare across dimensions of a single construct, and how these constellations relate with other aspects and experiences. Literature consensus holds neither approach superior to nor more important than another, but emphasizes that each approach is suited to answer to specific sets and types of research questions (Howard & Hoffman, 2018). Using a relational framework, we were specifically interested in mapping the associations not only of variables, but also of distinct clusters of people according to their unique experiences with mindfulness, self-compassion, and love, and how these clusters fared across indices of spirituality, mental health, and well-being.

Person-centered approaches may be classified into two primary groups: algorithm-based and latent variable-based (Woo et al., 2018, p. 201). Algorithm-based approaches are the simplest of the two, because they are non-parametric and because they are not based on a probability model obtained for the various sub-distributions of the constructs investigated. Among these algorithm methods, *k-means cluster* and *hierarchical clustering* are among of the most popular and widely used (Woo et al., 2018). By contrast, latent variable approaches assume that group membership is based on an unobserved categorical variable whose true value represents the likelihood of membership into a distinct subgroup of the population. Latent approaches are also model-based and thus provide comparable and testable sets of data-driven parameters and statistics, offering several advantages compared to algorithm-based approaches. These advantages include the inclusion of covariates in models, longitudinal modeling, measurement error, and statistical tests for assessing the best-fitting models (Woo et al., 2018). Examples of latent variable-based approaches include latent class analysis, latent profile analysis (which we use across our three empirical studies), as well as mixture regression, growth mixture modeling, and latent transition analysis (Woo et al., 2018). Although computationally demanding, with the fast rise in and increased access to computing power available to researchers, latent variable approaches have become popular and have been employed by a growing number of empirical studies aiming to elucidate distinct groups of people across multidimensional constructs. Key among these methods, latent profile analysis (LPA) has become especially prominent and important.

In brief, LPA is a probabilistic, model-based analysis based on structural equation modeling (SEM) and mixture-modeling approaches. LPAs allow researchers to empirically derive groups, each with unique parameters, or mixtures of distinct sub-distributions, based on a relatively large dataset. This clustering is key in elucidating ways in which people may be alike and differ beyond mere averages and standard deviations. As a model-based approach, LPA also minimizes researchers' reliance on subjective biases and judgment calls by offering objective information criteria and statistics that can be used in hypothesis-testing when examining best-fitting profile solutions. Common statistics used in LPAs include Akaike Information Criterion (AIC), Bayesian Information Criterion (BIC), sample-adjusted AIC, sample-adjusted BIC, and entropy (Nylund et al., 2007), bootstrapped likelihood ratio test (BLRT) and the Vuong-Lo-Mendel-Rubin tests. Consensus holds that model selection may emerge via a combination of objective criteria and hypothesis-testing, on the one hand, and theoretical meaning and conceptual relevance of profiles on the other (Howard & Hoffman, 2018; Nylund et al., 2007). Still, all LPA indices provide objective metrics for researchers to compare models when selecting profiles that may present as best-fitting (Nylund et al., 2007).

Study Sample, Measures, and Research Instruments

Across our three empirical studies, we conducted our analysis on a demographically diverse U.S. sample consisting of 1,499 participants aged 18 through 75 (M = 34.94; SD = 10.94), 51.4% of whom self-identified as female. In total, 83.6% of our sample self-identified as white, 7.2% self-identified as Hispanic, 8.3% self-identified as African-American, 2% self-identified as East-Asian-American, 1.4% as Native-American, and 0.7% as South-Asian-

American. Religiously, our sample included 48.5% self-identified Christians, 39.2% non-religious, 2.4% Buddhist, 1.3% Jewish, 0.9% Muslim, and 0.5% Hindu participants. All participants provided informed consent prior to joining the study, and were compensated after completing the study. To recruit for potential participants, our research lab first developed an online survey using Qualtrics, and then invited eligible participants through Amazon's Mturk.com. Timed-entries for onset and completion were also evaluated before as participants completed their response. Initially, we examined the demographic profile of our participants, and checked for missing data, outliers, and potential patterns in the missingness of or bias in data. We also conducted reliability analyses using Cronbach's alpha through all continuous study variables. Overall, over 96% of our participants completed all items of our questionnaire scale. There were no noticeable patterns among participants who did not complete all items. Aware of the potential for poor data quality, we employed attention checks, IP verification, timed entry and completion time, and thorough review of the integrity and quality of our data. We were also aware of the inherent limitations of crowdsourcing platforms for research. However, to reach a large national sample, we found this a viable option given robust the quality checks and assessments displayed above and growing efforts by online recruitment platforms to ensure data quality and standards. Though our study is limited to people with access to the internet, prior research suggests that internet-based samples drawing from crowdsourcing methods lead to samples more representative of the population at large than in-person convenience samples (Berinsky et al., 2012; Paolacci & Chandler, 2014). Interested in exploring profiles of mindfulness, self-compassion, and love in the U.S. population at large, we opted for such data source. Upon visual inspection and analysis, we found no specific patterns in the missingness of our data. To maximize the inclusion of our analyses, on specific cases, we used a simple imputation technique and procedure as described in the *tidyLPA* software documentation (J. M. Rosenberg et al., 2019a). We also preserved participants with missing items in the indicator scales as we compared profiles across distal outcomes, except in cases in which participants showed missing values specifically on the distal outcomes analyzed.

Study measures included indices of spirituality and religiosity, of mindfulness, self-compassion, of well-being, and psychopathology. For spirituality, we included the Delaney Spirituality Scale (Delaney, 2005a), Religious Meaning (Krause, 2003a), and the attributed degree of importance of spirituality/religiosity in life. For mindfulness, we used the standard Five-Facet Mindfulness Questionnaire (Baer et al., 2006a). For well-being, we used the Gratitude Questionnaire (McCullough et al., 2002), Meaning in Life Questionnaire (Steger et al., 2006), Multidimensional Scale of Perceived Social Support (Zimet et al., 1988a, 1990a), Subjective Vitality (Ryan & Frederick, 1997a), and Positive Emotion (Watson et al., 1988a). To measure depression, we used the Patient Health Questionnaire (PHQ-9; Kroenke et al., 2001) to measure anxiety, we used the Generalized Anxiety Disorder (GAD-7; Spitzer et al., 2006), and we measured negative emotion with the PANAS (Watson et al., 1998).

For our analyses, we first tabulated and processed the data using SPSS version 27. Then, we used *tidyLPA*, an *R* package developed for latent profile analyses (J. M. Rosenberg et al., 2019a) for latent profile analyses. In brief, *tidyLPA* expands and simplifies the *mclust* for R used for mixture modeling and cluster analyses (Scrucca et al., 2016a). Using *tidyLPA*, researchers may derive mixture models and conduct cluster analysis through a free and open-source software and let inter-profile variances and covariances vary, be equal, or fixed at zero among profile indicators. Outputs include Akaike Information Criterion (AIC; Akaike, 1987), the Bayesian Information Criterion (BIC; Schwarz, 1978), the bootstrapped likelihood ratio test (BLRT), and entropy. To assess whether and to what extent distinct profiles differed on the various measures of psychopathology, spirituality, positive psychology, and well-being, we performed a series of analyses and comparisons of distal outcomes through two-step approaches that broadly fall under the *classify-and-analyze* framework (Bray et al., 2015a) including ANOVAs. Next, we provide a brief introduction on each of our person-centered studies, naming their premises, key background, main hypotheses, and overall purpose.

Study 1: A Latent Profile Analysis of the Five Facets of Mindfulness in a U.S. Adult Sample: Spiritual and Psychological Differences Among Four Profiles of Mindfulness

Our first paper built on the premise that mindfulness may not look the same in every person, as a select few empirical studies have shown (e.g., Bravo et al., 2016, 2018; Pearson et al., 2015). Much of prior mindfulness research, in fact, assumes a single, homogeneous distribution via correlation and regression analyses of the construct. Because no prior person-centered study had previously examined the associations between profiles of mindfulness and spirituality, we set out to investigate this relationship. To do so, we first reviewed prior studies exploring hierarchical cluster analysis (e.g., Lilja et al., 2013) and latent profile analysis of mindfulness (e.g., Bravo et al., 2016; Pearson et al., 2015). We aimed to add nuance to the literature by comparing studies that had used the full FFMQ with those that used an abbreviated format (Sahdra et al., 2017a), and contrasted our large sample with those focusing on adolescents (Calvete, Fernández-González, et al., 2020), cancer patients (Lam et al., 2018a) and military personnel (Shapiro et al., 2008). We also aimed to demonstrate that, although helpful and enriching, earlier person-centered studies still left unanswered questions regarding the relationship between mindfulness profiles and spirituality, as well as with other indicators of well-being, stress, depression, anxiety on the one hand, and thriving on the other. Above all, we were interested in examining whether there were distinct profiles of mindfulness, and how these profiles compared and contrasted among key indices of well-being. Our findings transcended those found in previous studies by suggesting four overall profiles of mindfulness in the United States, each with a distinct set of associated mental health, spirituality, and psychopathology outcomes. We published our first study in the peer-reviewed journal *Current Psychology* (De Souza Marcovski & Miller, 2022). Chapter 2A is this study in its entirety.

Study 2: Self-Compassion Profiles in the United States are Differentially Associated with Well-Being, Psychopathology, Contemplative Practice, and Spirituality

For our second paper, we reviewed prior LPA studies examining self-compassion (Neff 2003a, Neff 2003b). We then conducted our own latent profile analyses of self-compassion and compared emerging profiles across indices of spirituality, psychopathology and well-being. In preparing for this study, we found that, despite the substantial growth in popularity and clinical use of self-compassion, the widely used *self-compassion scale* (SCS, Neff, 2003) has come under scrutiny in recent years. After performing a meticulous review of 18 studies examining the two bipolar facets self-compassion, for example, Murris & Petrocchi (2017) concluded that the negative dimensions of self-compassion may be a marker of *vulnerability* to psychopathology akin to neuroticism, rather than the direct theoretical opposite of self-compassion per se. Combining reverse-coded negative dimensions with positive ones, they argued, may inflate the overall association between self-compassion and psychopathology. By contrast, Neff (2016, 2022) and Neff and colleagues (2018) have strongly advocated for an integrated, two-poled scale of self-compassion as theoretically sound and empirically supported. However, no consensus has yet been established for how to definitely and validly measure self-compassion. We explored that, in part, no consensus may have been reached because most examinations of self-compassion have been exclusively variable-centered. Newer person-centered studies may expand our understanding of self-compassion as multifaceted, multidimensional, and heterogeneous, and may nudge us into accepting that distinct profiles may be at play, with theoretical implications for how to best measure self-compassion. The added benefit of such person-centered approaches cannot be understated: more precise and accurate classification may also help clinicians fine-tune interventions to match the needs and experiences of their specific patients, and people themselves may feel more self-aware and self-understanding by grasping onto a group that suits and summarizes their complex characteristics. Finally, because prior LPA studies on self-compassion (Phillips, 2021; Ullrich-French & Cox, 2020; L. Wu et al., 2021) relied on significantly smaller samples than we have in our study, and opted for profile-solutions with very small numbers of participants each, ours was, to the best of our knowledge, the first to bridge this gap and to compare emerging profiles of self-compassion with indices of spirituality. Chapter 2B includes our paper in its entirety, and which is under peer-review in *Self and Identity*.

Study 3: Love Profiles in the United States Are Differentially Associated with Well-Being, Psychopathology, and Spirituality

Our third and final paper builds on the methodological approach and theoretical interest of relationality, person-centered techniques, and spirituality similarly to our two prior studies. Our third empirical study was the first in the literature to assess *love experiences* via Sorokin's Multidimensional Inventory of Love Experience (SMILE; Levin & Kaplan, 2010), profiles of love, and their differential associations with well-being, psychopathology, and spirituality. Specifically, we explored distinct dimensions of love and built on prior literature investigating the relationship between transpersonal dimensions of love with mental health and well-being. Prior studies indicated that subjective experiences of love are closely linked with mental health and well-being (Dadfar et al., 2021; Levin & Kaplan, 2010; Oravecz et al., 2020). Plus, although research on multiple dimensions of love remains new and of a slow rise in the clinical and empirical literatures, more remains to be discovered on the correlates and foundational elements of various types of love with mental and emotional health in large samples. Building on the growing person-centered literature and using latent profile analyses, our third study examined the differential associations of love with spirituality, well-being and mental health indices. We did so by investigating how Sorokin's (1954, 2015) six dimensions of love interrelate, and by comparing emerging groups of love across outcomes of interest. For example, might we find that some people present with higher levels of *social*, *psychological* and *biological* love, but with lower levels of *religious* and *ethical* love, or vice-versa? With a wide range of potential combinations and permutations of love groups, our research aimed to elucidate the emerging types, mindsets, or profiles of love in the U.S. at large. We hypothesized that meaningful and distinct profiles would emerge. We also hypothesized that profiles displaying greater indices of love overall might present with stronger positive associations with markers of well-being, flourishing, life satisfaction, and spirituality, and less psychopathology, whereas profiles with the lowest indices of love would indicate opposite trends. Chapter 2C features the study in its entirety, revealing the nuances of love across a large sample of the U.S. population at large. Finally, at the end of the present dissertation manuscript, we reflect on ways our findings align with the framework of relational spirituality, and potential pathways for this match, such as *attachment*, *differentiation*, and *intersubjectivity*.

Chapter 2A: A Latent Profile Analysis of Mindfulness in a U.S. Sample: Spiritual and Psychological Differences Among Profiles

Abstract

Person-centered studies have grown in the mindfulness literature recently. Previous research has suggested four profiles of mindfulness, each with differential mental health and emotional outcomes. The present study supports the existence of these four profiles of mindfulness based on the five facets of mindfulness (observing, nonjudging, acting with awareness, nonreactivity, and describing). We provide further insight into differences in levels of psychopathology, positive psychology indicators, and spirituality among these profiles. Using model-selection criteria (e.g., BIC, AIC, entropy) in a latent profile analysis (LPA), we identified four groups based on their scores on the Five-Facet Mindfulness Questionnaire (FFMQ) among 1499 US participants. We then compared profiles across measures of positive psychology, psychopathology, and spirituality. Overall, we found support for four profiles of mindfulness in the U.S. sample, replicating and extending findings from prior studies. In addition, these four profiles showed differential levels of previous experience with mindfulness, mind–body and meditative practice, and in well-being and spirituality. Specifically, the *high-mindfulness* profile appeared as the healthiest and most adjusted of the four profiles; the *judgmental-observing* and *nonjudgmental-aware* profile showed higher levels of anxiety, depression, and the lowest levels of well-being. By contrast, the *average mindfulness* displayed intermediate levels of adjustment, spirituality, and well-being. Spiritual and positive psychology outcomes among the *nonjudgmentally aware* and *judgmental observing* appeared mixed. In sum, mindfulness profiles are differentially associated with psychopathology, positive psychology, and spirituality.

Mindfulness, defined as "the awareness the arises by paying attention, on purpose, in the present moment, and non-judgmentally" (Kabat-Zinn, 2013b, p. xxxv), has become a mainstream and popular construct both in the academic literature and in popular culture. Although mindfulness has its conceptual roots in Eastern spiritual, religious, and philosophical traditions, Western scientists, psychotherapists, and health practitioners have made a great effort to translate and to teach mindfulness in both spiritual and secular settings. Despite this widespread use and growing importance, the operationalization and measurement of mindfulness has continued to evolve, generating multiple scales and sub-scales across the empirical literature to date. Few scales now measure mindfulness as a unidimensional, trait-like construct, but rather as a multi-faceted and multi-dimensional experience. Still, the construct of mindfulness remains to be distilled.

Among the several instruments that purport to measure mindfulness (CAMS; Feldman et al., 2007, KMS; Baer et al., 2004; MAAS; Brown & Ryan, 2003; etc.), the Five-Facet Mindfulness Questionnaire (FFMQ; Baer et al., 2008) has become one of the most widely used. In part, this is due to its multidimensionality and high reliability. In developing the FFMQ, Baer and colleagues (2008) built on the psychometric and validity foundations of pre-existing instruments, and devised a questionnaire that drew upon five *facets* or inter-related *dimensions* of mindfulness. Specifically, the five dimensions were a) *observing* one's own environment, emotions, and present-moment experience, b) *describing,* or putting one's experience into words; c) *acting with awareness,* consciously, rather than in the "automatic pilot", d) *not judging* or not criticize one's own thoughts, emotions, sensations or overall experience; and e) *not reacting, or* not to getting carried away by thoughts and feelings, but simply letting them come and go. The FFMQ has received robust empirical support in both its construct validity and reliability across a large number of studies and samples (e.g., Carpenter et al., 2019; de Bruin et al., 2012; Lilja et al., 2013; Tran et al., 2013). Yet, despite its widespread use in the psychological, educational, clinical, and social sciences literatures, most studies on mindfulness have been *variable-centered*. That is, statistical analyses typically generate a sum score of all five dimensions of mindfulness, treating them uniformly and as an aggregate, and then comparing them with other indicators and psychological variables through regression analyses and correlation coefficients (Carpenter et al., 2019). Few studies, in turn, have explored *person-centered* approaches to mindfulness to identify potential population-wide variations in mindfulness style (e.g., Pearson et al., 2015); little has been studied regarding the existence of different and unique *profiles* of mindfulness style across the five purported dimensions of the FFMQ.

Person-Centered Approaches to the Study of Mindfulness

Recent empirical evidence suggests that mindfulness may not look the same in every person (e.g., Bravo et al., 2016; Lilja et al., 2013; Pearson et al., 2015). Several studies now provide evidence in support of different profiles according to varying levels of mindfulness facets. Person-centered approaches (e.g., hierarchical cluster analysis, latent profile analysis) provide researchers with the statistical framework to examine potential varying distributions of trait mindfulness scores within the population, and thus to explore unique groups or profiles of mindfulness. These approaches allow researchers to determine whether there may be a handful of mindfulness profiles, or whether mindfulness may have a single and uniform distribution in the general population.

Among the earliest researchers to explore mindfulness via a person-centered approach, Lilja and colleagues (2013) performed a hierarchical cluster analysis using the FFMQ. The authors arrived at several important insights that have been carried through the literature to date since. Having found 13 unique clusters of individuals based on their scores of mindfulness across the five dimensions, the Lilja and colleagues (2013) discovered that the *observing* scale is an important differentiator between *experienced meditators* (defined as participants mentioning having a “fair amount,” or “extensive” amount of practice, or a minimum of one year of a mindfulness practice) from *non-meditators* (defined as having had no prior experience of meditation). Their results were helpful in shedding light on how the five dimensions might differ across people, and on the role of *observing* in helping distinguish experienced meditators from non-experienced ones. Of note, this study was conducted exclusively with a Swedish sample.

Subsequently, Pearson, Lawless, Brown, and Bravo (2015b) approached the five dimensions of mindfulness via a latent profile analysis (LPA). Their goal was to explore distinct profiles of mindfulness in a college sample. Pearson and colleagues (2015) found evidence in support of a four-class model. The profiles featured the majority of the sample as a *low-mindfulness* class (59% of the sample), followed by a *high-mindfulness* class (26%), and two noticeable but minority groups which, when combined added to roughly 13% of the sample (Pearson et al., 2015). These two minority groups were named *judgmental observing* (6%), and *non-judgmental aware* (7%). Among these profiles, the *judgmental observing* showed the highest degree of emotional distress and maladaptive coping styles, while the *high-mindfulness* and *non-judgmental aware* reported the highest degree in adaptive responses to various emotional profiles and states. Importantly, only college students, with a mean age of 20, participated in this study. The generalizability of these groups remained unaddressed.

In sequence, Bravo et al., (2016) replicated the findings from Pearson and colleagues (2015), and also explored the relationship between these four classes and additional distal outcomes of well-being and psychopathology. The researchers found the *high-mindfulness* group to present the highest levels of well-being, emotion self-regulation, psychological flexibility; the *judgmental observing* group to show the lowest rates of psychological well-being, and the highest levels of anxiety and depressive symptoms. Of note and similarly to participants in Pearson and colleagues (2015), only college students participated in this study. Building upon these findings, Sahdra and colleagues (2017) conducted both an LPA and a series of exploratory equation modelling approaches to assess the generalizability of the previously established four-profile solution devised by earlier researchers (Pearson et al., 2015, Bravo et al., 2016). Using data from a large adult sample including 7884 U.S. participants, the authors found both support for previous models derived from college-samples, and a unique cluster to the diverse adult sample. Sahdra and colleagues (2017) also found two additional distinct and novel profiles: that of *average-mindfulness* and that of *moderately non-judgmental*. However, Sahdra and colleagues (2017) used an abbreviated, 20-item version of the FFMQ, instead of the full, 39-item version that previous researchers had used, and did not include measures of spirituality. More recently, several newer studies have continued to provide evidence for these distinct profiles of mindfulness across countries, age groups, and clinical conditions.

Studying mindfulness and attributions in the context of romantic relationships, Kimmes and colleagues (2017) also found evidence for the same four profiles of mindfulness (e.g., high mindfulness, nonjudgmentally aware, low mindfulness, and non-judgmental observing) described earlier by Pearson and colleagues (2015). Also using LPA and follow-up structural equation modeling analyses on a sample of 542 young adults in romantic relationships, the authors detected significant differences among profiles in how individuals from each profile may make causal attributions about the other person's motives and behaviors, and in general attachment styles. Furthermore, the authors also found that individuals from the high mindfulness and the nonjudgmentally aware profiles displayed more benign attributions about their partners, while individuals from nonjudgmental aware profile displayed less heightened attachment anxiety. Subsequently, Bravo and colleagues, (2018) also replicated findings of the same four-profile solution among another sample of college students. However, they found evidence for a three-class solution among the U.S. military personnel. That is, among veterans, reservists, and active-duty personnel, a combined *low-mindfulness* and *judgmental aware* group emerged for 56.7% of the military sample; a *nonjudgmentally aware* (30.7%) and a *high mindfulness* (12.5%) also emerged among veterans and military personnel. As found in earlier studies, the *high mindfulness* profile both among civilians and members of the military was associated with the most adaptive mental health indicators, while the *judgmental observing* and *low mindfulness* profiles were found to be the least adaptive of profiles.

Expanding the scope of this person-centered work, and exploring dispositional mindfulness in a group of adolescents (ages 12-17) from Spain, Calvete and colleagues (2020) also found evidence for a three-profile solution. Specifically, the authors found a *moderate mindfulness* class, as well as *the judgmental observing*, and the *nonjudgmentally aware* groups that had also emerged in earlier studies and among other samples. With the important addition of cross-referencing data among self-report and parent-report approaches, the authors also found that the *judgmental observing* group was associated with worse overall adjustment, while the *nonjudgmental aware* profile was associated with better adjustment among a variety mental health indicators in adolescents. Other studies exploring additional populations have followed suit. Lam and colleagues (2018), for instance, analyzed data from a sample of 212 cancer patients and their findings replicated a four-profile solution. As found in earlier studies, the authors also found evidence for the *low mindfulness* (51%), *judgmental observing* (24%), *nonjudgmental aware* (7%), and *high mindfulness* (18%) profiles well. Furthermore, the authors found that the *judgmental observing* and the *low mindfulness* profiles were associated with the highest levels of depression and anxiety. Despite the growing consensus of these studies on the structure of profiles, questions about the generalizability of these findings remained unexplored.

To that end, Ford and colleagues (2020), using data from a sample of 715 U.S. adults with ages between 20 and 88, also demonstrated the same four profiles of mindfulness (e.g., *high mindfulness, low mindfulness, judgmentally observing,* and *nonjudgmental aware* profiles.) Ford and colleagues (2020) highlighted that differences in shapes and characteristics of the distributions of profiles may exist according to technique used. In particular, they found differential results when conducting a cluster analysis versus when conducting an LPA as several other recent investigations have done. All in all, these findings maintain that the high mindfulness profile was associated with the highest psychological well-being, while the low mindfulness profile was associated with the levels of well-being.

Combined, growing evidence reinforces the heterogeneity of profiles of mindfulness in the general and in specific populations. Importantly, variations in number of classes exist depending on the specific population studied (with three profiles among adolescents and three among military personnel, for instance) as well as in the analytical technique used for the investigation (e.g., latent profile analysis versus cluster analysis). However, the *high mindfulness*, the *low-to-moderate* mindfulness, the *nonjudgmental aware*, and the *judgmental observing* profiles have continued to emerge as common profiles across most samples, and each with differential levels of psychopathology, well-being, and overall adjustment. Still, questions pertaining to the individual differences in personality characteristics, and in spirituality or religiousness among profiles have been left unexplored. Nonetheless, a growing number of studies point to significant associations between mindfulness and spirituality (Carmody et al., 2008a; Greeson et al., 2011b). In fact, some studies have also suggested that gains in spirituality may in fact mediate the positive effects of mindfulness training in predicting symptom reduction and well-being (Greeson et al., 2011). Furthermore, earlier person-centered studies have not yet assessed the extent to which experiences with lived spirituality, potentially to include prayer, meditative, transcendent or mind-body practices may differentially be associated with these different profiles of mindfulness. The present study aims to extend findings from earlier person-centered studies by focusing on individual differences among profiles pertaining to personal *spirituality* and in *contemplative practice*.

Specifically, we aimed to replicate the latent profiles for the five facets of mindfulness in the U.S. in a large demographically and age diverse sample. Then, having identified mindfulness profiles in the current large and diverse sample, we then aimed to compare the profiles across a wider range of individual difference variables, including depression and anxiety, self-compassion, life satisfaction, gratitude, as well as religiosity and spirituality.

Method

Participants and Procedure

A total of 1499 U.S. adults aged 18 through 75 (M = 34.94; SD = 10.94), 51.4% of whom self-identified as female, took part in the present study. All participants provided informed consent prior to joining the study, and all were compensated for their time. To recruit potential participants, we first developed an online survey using Qualtrics, and invited eligible participants through Amazon's Mturk.com website. Several recent studies have commented on the drawbacks and strengths, the reliability and validity of findings derived from MTurk as the recruitment platform (Buhrmester et al., 2011; Landers & Behrend, 2015; Mason & Suri, 2012).

We delivered an extensive research questionnaire with a number of widely used measures of spirituality, psychological well-being, mental health, and mindfulness. We abided by the ethical standards laid down in the 1964 Declaration of Helsinki and its later amendments. The Institutional Review Board (IRB) of Teachers College, Columbia University, approved the present study.

Measures

Mindfulness. We used the full-version, 39-item Five-Facet Mindfulness Questionnaire (FFMQ; Baer et al., 2008) in this study. Previous studies have demonstrated reliability and construct validity of the FFMQ among for a variety of samples, both U.S-based and international (e.g., Deng et al., 2011; Mandal et al., 2016). The five facets of mindfulness included in the instrument are *observing* (e.g., “when I take a shower or bath, I stay alert to the sensations of water on my body”), *describing* (e.g., “my natural tendency is to put my experiences into words”*), acting with awareness* (e.g., “when I do things, my mind is easily distracted”; reverse-coded), *non-judgment* (e.g., “I criticize myself for having irrational or inappropriate emotions”; reverse-coded) and *non-reactivity* (e.g., “when I have distressing thoughts or images, I just notice them and let them go”). We found excellent indices of the internal reliability. Full scale Cronbach’s α = .87 (*observing* α = .82; *describing* α = .87; *acting with awareness* α = .92; *nonjudging* α = .92; *non-reactivity* α = .80).

Negative Affect and Psychopathology Measures

Anxiety Symptoms. We included the widely used seven-item instrument of anxiety symptoms: Generalized Anxiety Disorder -7 (GAD-7; Spitzer et al., 2006). The GAD-7 is a brief but robust instrument that has shown excellent internal consistency and substantial evidence of diagnostic and criterion validity. The instrument is sensitive in measuring various levels of anxiety, and has been used and validated with various samples and populations around the world (Spitzer et al., 2006). Cronbach's α = .93.

Depression Symptoms. For depression symptoms, we used the Patient Health Questionnaire-9 (PHQ-9; Kroenke et al., 2001). We chose this short scale because it has shown excellent internal consistency and good evidence of diagnostic and criterion validity among populations of various countries (e.g., Arroll et al., 2010; Becker et al., 2002; Lotrakul et al., 2008). In brief, the PHQ-9 offers a parsimonious and effective measurement of depression. Cronbach's α = .91.

Negative Affect. To measure participants' present levels of negative affect, we used the Positive and Negative Affect Schedule (PANAS; Watson et al., 1988). Participants were asked to rate, using a 5-point scale, in which 1 is *very slightly or not at all* and 5 means *extremely* the degree which they were feeling a particular distressing emotion (e.g., fearful, upset, irritable, distressed, etc.). The higher the score, the more negative affect a participant may be experiencing. Cronbach's α = .92.

Measures of Positive Psychology

Gratitude. To measure gratitude, we used the Gratitude Questionnaire (Emmons et al., 2003). The Gratitude Questionnaire is a brief, unidimensional, seven-point Likert scale, dispositional measure of gratitude. Sample items include: "I have so much in life to be thankful for" and "I am grateful to a wide variety of people." Gratitude is a central concept in positive psychology, and has received a great deal of scholarly attention and empirical research. Higher ratings of gratitude are associated with more frequent positive emotions, with higher optimism, life satisfaction, and lower levels of stress and anxiety (Emmons et al., 2003). Cronbach's α = .82.

Self-Compassion. To assess self-compassion, we used the Self-Compassion Scale (SCS; Raes et al., 2011).The Self-Compassion Scale (SCS) assesses individual levels of self-compassion. Self-compassion is defined as the ability to experience suffering while maintaining warmth, connection, and empathetic concern toward oneself (Raes et al., 2011). The 12-item instrument is comprised of three key dimensions: self-kindness, common-humanity, and mindfulness. A growing body of research links self-compassion with emotional resilience, greater psychological health, optimism, and lower indices of depression and anxiety (Neff, 2003). Cronbach's α = .86.

Satisfaction with Life. To measure participants' levels of life satisfaction, we used the Satisfaction With Life Scale (SWLS; Diener et al., 1985). The SWLS scale is a widely used, validated and concise five-item instrument measuring life satisfaction. Participants rate items (e.g., "I am satisfied with my life") on a 7-point Likert scale, indicating the degree to which they *disagree* or *agree* with each statement. Higher scores suggest greater levels of satisfaction in life. Cronbach's α = .94.

Subjective Vitality. To measure subjective vitality, we used the Subjective Vitality Scale (SVS*;* Ryan & Frederick, 1997*)*, a brief, seven-item instrument that measures participants' energy and aliveness, captured by items such as "I feel alive and vital," "I have energy and spirit," "I look forward to each day," "I feel energized." Participants were asked to rate, on a 7-point scale, the extent to which each statement is *true* or *not true* as it applied to them and their lives at the present. Subjective vitality has been associated with autonomy and self-actualization, and addresses somatic and psychological concomitants of "the energy felt to be available to the self." Cronbach's α = .92.

Perceived Social Support. We used the Multidimensional Scale of Perceived Social Support (Zimet et al., 1988) to measure social support. In brief, this instrument consists of 12 items and assesses, in a Likert-scale fashion, perceived support from three distinct social groups: a) family; b) friends; and c) significant other (Zimet et al., 1988). The scale has shown robust evidence as a buffer against stress (Zimet et al., 1990b). It also has been associated with many other indicators of well-being and health. Cronbach's α = .95.

Positive Affect. To measure participants' present levels of positive affect, we used the Positive and Negative Affect Schedule (PANAS; Watson et al., 1988). Participants rated, using a five-point scale, in which 1 is *very slightly or not at all* and 5, *extremely*, the degree to which they felt a particular positive emotion (e.g., joy, cheerfulness, contentment, etc.). The higher the score, the more positive affect a participant may be experiencing. Cronbach's α = .91.

Spirituality and Religiosity Measures

Personal Spirituality. The Delaney Spirituality Scale (DSL; Delaney, 2005), is a 23-item, widely used instrument of spirituality that measures four interrelated dimensions of spirituality: a) ecological awareness (e.g., "I believe that nature should be respected"), b) self-discovery (e.g., "My life is a process of becoming"), c) relational spirituality (e.g., "I respect the diversity of people"), and d) attunement with the sacred or one's higher power (e.g., "my faith in a higher power/universal intelligence helps me cope with the challenges of my life"). Participants rated, on a six-point Likert-scale, the degree to which they *agreed* or *disagreed* with each statement. Sum scores were computed for an overall sense of spirituality. Cronbach's α = .94.

Religious/Spiritual Importance. As in previous research studies, we asked participants: "how personally important is religion or spirituality to you?" Participants' responses ranged from 1: *not important at all*, to 4: *highly important*, where higher scores indicate greater levels of religious and spiritual importance. A growing body of evidence suggests that a strong sense of spirituality is associated with a number of positive mental health outcomes, as well as decreased risk for major depression (Miller et al., 2014a). This single, four-point Likert scale item, was once the most widely used measure for over the past thirty years of research on spirituality and religion (Koenig, 2009, 2010).

Spiritual and Religious Meaning. Religious meaning was assessed through brief instrument developed by Krause (2003). This brief, six-item instrument measures the degree to which participants' meaning is derived from their faith and one's spiritual beliefs (e.g., "my faith gives me a sense of direction in my life.") Prior research has shown religious meaning to be associated with life satisfaction, self-esteem, and an optimistic orientation to life (Krause, 2003). Yet, differently from these measures, religious meaning assesses meaning-making from a specifically spiritual perspective. Sum scores capture overall spiritual/religious *meaning*. Cronbach's α = .97.

Spiritual and Religious Struggle. Spiritual and religious struggle were measured through a seven-item instrument within the College Students' Values and Beliefs Survey (Bryant et al., 2003). The Spiritual and Religious Struggle instrument assesses subjective experiences of feeling unsettled, disillusioned, in disagreement with, or questioning of one's spiritual beliefs (Bryant et al., 2003). A growing body of studies define religious struggle as "tensions, strains, and conflicts in relation to what people hold sacred" (Exline et al., 2014, 2020)**.** Religious struggle has been commonly reported in the general population and is associated with a lack of a sense of purpose and of perceived significance in one's life, as well as with indicators of anxiety, depression, somatization, and obsessive-compulsiveness, including suicidality, social isolation, among other (Wilt et al., 2016). Higher scores indicate higher levels of religious struggle. Cronbach's α = .74.

Demographics

Participants reported their age, gender, religious background, race and ethnicity, marital status, educational achievement, employment status, and previous experiences with mindfulness meditation or mind-body (e.g., yoga, tai-chi) practices. The large majority of our sample self-identified as White (83.6%), while 8.3% self-identified as African American and 7.2% self-identified as Hispanic; 2% identified as Chinese-Asian, 1.4 % as Native American, and 0.7% as South Asian. We also collected information regarding participants' present and past experience with meditative, spiritual, and mind-body practices. In terms of distribution of religious affiliation, our sample was comprised of self-identified Christian participants (48.5%), followed by non-religious (39.2%), then by Buddhists (2.4%), Jewish (1.3%), Muslim (0.9%) and Hindu (0.5%). With respect to educational achievement, 33.4% of our sample had attained a college degree, 9.7% had attained a graduate degree, and 14% had attained a high school degree. For mindfulness and mind-body practice 6.1% of our sample (n = 90) reported having both a regular mind-body (e.g., yoga, chi-gong, tai chi), 8% of our sample (n = 119) reported having a regular meditation practice (e.g., vipassana, mindfulness, Zen, Tibetan, Christian prayer, Transcendental Meditation, etc.), and 9.1% of our sample (n = 135) reported having both a regular mind-body practice and a regular mindfulness meditation practice.

Data Analyses

Descriptive Statistics

First, we tabulated and processed the data using SPSS version 27 (IBM, 2020). We examined the demographic profile of our participants, and checked for missing data, outliers, and potential patterns in the missingness of data. We also conducted reliability analyses using Cronbach's alpha through all continuous study variables. Overall, less than 1% (i.e., 0.8%, or 14 participants or less) of participants showed missing values for any of the items in the FFMQ There were no noticeable patterns among participants who did not complete all items. Upon visual inspection and analysis, we found no specific patterns in the missingness of our data. To maximize the inclusion of our analyses, we used a simple imputation technique and procedure as described in the *tidyLPA* software documentation (Rosenberg et al., 2019a). We also preserved participants with missing items in the mindfulness scales as we compared profiles across distal outcomes, except in cases in which participants showed missing values specifically on the distal outcomes analyzed. In sequence, we computed and examined the correlation matrix of all subscales of mindfulness. Table 1 summarizes these results.

Latent Profile Analysis

We performed a latent profile analysis (LPA) in order to identify unique clusters, or classes, or participants, using the five facets of mindfulness as our indicators (Pastor et al., 2007a). In the extant literature, LPA is known by a variety of names (e.g., latent class cluster analysis, mixture modeling profile analyses), and, broadly, as mixture modeling, latent variable approaches, and of person-centered techniques. For the present analyses, we used the R package *tidyLPA (*v. 1.0.8; Rosenberg et al., 2018). The *tidyLPA* package expands and simplifies the *mclust* (Scrucca et al., 2016b) program for R used for mixture modeling and cluster analyses. In brief, *tidyLPA* was developed to allow researchers to derive mixture models and to conduct cluster analysis through a free and open-source software. Moreover, *tidyLPA* also allows investigators to control for variances and covariances among indicators in the generated profiles, or, instead to let these parameters vary freely across models and profile-solutions, giving researchers a chance to compare models and to search for more parsimonious solutions. A thorough overview and summary of the various parameterization models in LPA may be read in the review by Pastor and colleagues (2007). Following the comprehensive LPA analytic approach recommended by Pastor and colleagues (2007), we assessed the fit indices and model solutions from the various parameterizations, allowing variances to vary or to remain equal, and covariances to vary, to remain equal, or to be kept at zero across several models. Table 2 summarizes the various model indices and fit across several parameterizations.

As mentioned, *tidyLPA* allows for four specific types of parameterization, all of which we ran in the present study. Model A is the most constrained and restrictive model: variances are held *equal* across different profiles, and covariances between indicators are constrained to be *zero* (i.e., equal variances, covariances fixed to 0). Model B offers some additional flexibility, as *variances freely vary* across individual profiles, yet covariances across indicators remains fixed to *zero* (i.e., varying variances, covariance fixed to 0). Model C maintains indicator *variances equal* across profiles, but lets the covariances among the various indicators to be estimated and kept *equal* across various profiles (i.e., equal variances and equal covariances). Finally, Model D, the most complex model, allows both variances and covariances across profiles to be freely estimated without constraints (i.e., varying variances, varying covariances).

In assessing model fit solutions, we specifically considered the Akaike Information Criterion (AIC; Akaike, 1987), the Bayesian Information Criterion (BIC; Schwarz, 1978), the bootstrapped likelihood ratio test (BLRT), and entropy as the primary LPA indices in our analysis. We also ran each model using a single imputation for missing values and standardized our indicator variables of mindfulness. We used the alpha level of $p = .05$ for decision-making on better model when bootstrapped likelihood ratio test results applied. Finally, we prioritized more parsimonious solutions and performed visual inspections of various profiles solutions in order to choose a final class model and solution, considering confidence interval, distinguishability, and meaningful differences among profiles.

ANOVAs, Cross-Tabulations, Chi-Square Tests of Proportions

To assess whether and to what extent different profiles of mindfulness differed on the various measures of psychopathology, spirituality, positive psychology, and well-being, we performed a series of analyses of variances (ANOVAs). Like earlier studies in the literature (e.g., Bravo et al., 2016; Pearson et al., 2015) we used participants' most likely profile of membership to predict each of the individual difference variables across pathology, positive psychology, and spirituality. We also conducted cross-tabulation and subsequent Chi-Square Tests of Proportions, to identify the demographic characteristics of each of the emerging mindfulness profiles. When multiple comparisons were run among each the various profiles, we used Tukey's HSD procedure for all pair-wise multiple comparisons to control for Type I errors.

Results

Our first aim was to assess the relationships among the five facets of mindfulness in our sample. Table 1 shows two-tailed Pearson correlations among the five facets of mindfulness. Consistent with prior studies, we found positive correlations among most of the various facets of mindfulness, but an inverse association between *observe* and *nonjudgment* (r = -.125, p < .001) and no significant association between *observe* and *acting with awareness* (r = .007, p = .801). As noted in earlier validity studies (Baer et al., 2006b; Rudkin et al., 2018), the *observing* scale has shown an inconsistent patterns of correlations with other facets of mindfulness.

Table 1: Pearson Correlations among five facets of mindfulness.

	Observe	Nonreactivity	Nonjudgment	Describing	Acting with Awareness
Observe	-				
Nonreactivity	.364**	-			
Nonjudgment	-.125**	.172**	-		
Describing	.254**	.335**	.340**	-	
Acting with Awareness	.007	.201**	.546**	.453**	-

Note. ** $p < 0.001$

Our second aim was to identify profiles of mindfulness indicators in our large, diverse sample, and to determine whether this might replicate previous findings. Table 2 displays results from latent profile analyses (LPA), including AIC, BIC, entropy levels and bootstrapped likelihood ratio test *p*-values for across Models A through D, and across profiles 1 through 5. We chose to include a limit of five profiles per group, for a number of reasons: first, because earlier studies reported no more than four mindfulness classes; second, because a higher number of profiles shrinks groups to smaller sizes and thus poses threat to the validity of generalizability of such groups. Lower values for AIC, BIC are indicative of better-fitting models, and higher levels of entropy suggest increased classification utility and precision of the model.

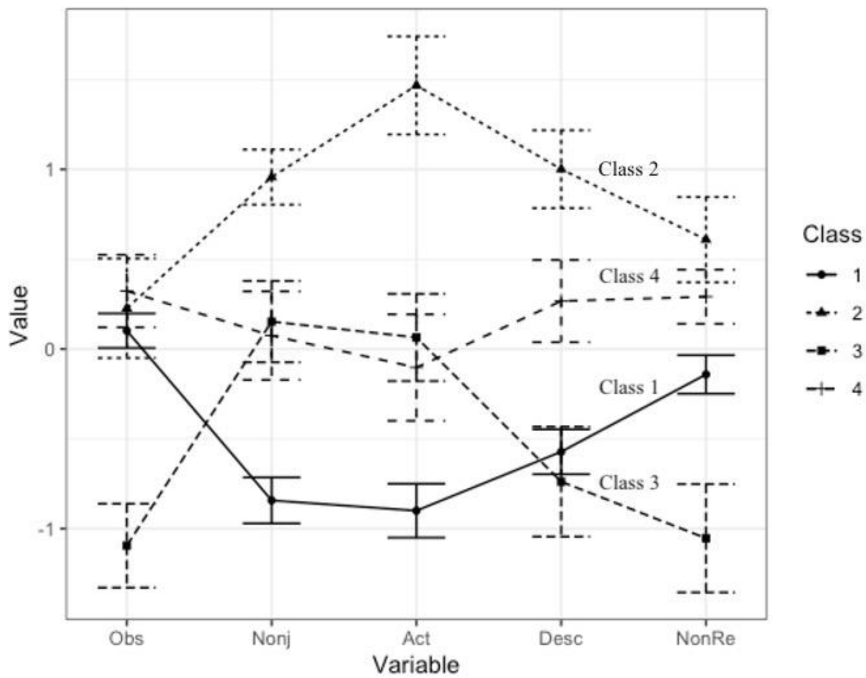
Table 2: Fit indices and LPA results with Models A, B, C, and D, and from 1- through 5-class solutions, indicating AIC, BIC, entropy, and bootstrapped likelihood ratio test.

Model	Classes	AIC	BIC	Entropy	Min. Probability	Smallest *n (%)*	BLRT (p)
Model A:	1	21284	21338	1	-	-	-
(equal variances,	2	20307	20392	0.77	0.88	31%	0.01
covariances: zero)	3	19868	19985	0.83	0.86	7%	0.01
	4	19653	19802	0.85	0.71	5%	0.01
	5	19631	19812	0.73	0.69	5%	0.01
Model B:	1	21284	21338	1	-	-	-
(varying variances;	2	20187	20298	0.72	0.89	44%	0.01
covariances: zero)	3	19454	19624	0.73	0.74	15%	0.01
	4	**19201**	**19429**	**0.74**	**0.74**	**14%**	**0.01**
	(An LPA was unable to fitted for a 5-class solution)						
Model C:	1	19869	19975	1	-	-	-
(equal variances; equal	2	19658	19796	0.78	0.88	28%	0.01
covariances)	3	19432	19602	0.84	0.83	5%	0.01
	4	19363	19565	0.8	0.76	4%	0.01
	5	19367	19601	0.6	0.71	4%	0.01
Model D:	1	19852	19958	1	-		
(varying variances;	2	19293	19511	0.62	0.72	47%	0.01
varying covariances)	3	18963	19292	0.6	0.76	27%	0.01
	4	18887	19327	0.61	0.75	16%	0.01
	5	18760	19313	0.67	0.71	11%	0.01

Note: AIC: Akaike Information Criterion; BIC: Bayesian information Criterion; BLRT: Bootstrapped likelihood ratio test. Boldened row indicates the selected solution. Min. Probability: the minimal probability value for assignment to one of the classes within this specific profile solution.

As our results indicate, among the various possible profile solutions, Model D (which allows for both variances and covariances to be freely estimated and to vary across profiles), featured the lowest—and therefore the best-fitting—BIC and AIC values. However, this more complex parameterization of Model D came at the expense of precision in classifying of participants unequivocally into a particular group (i.e., entropy values ranging from 0.62 and 0.67). These results suggest that although goodness-of-fit indices favored the most complex Model D, such added complexity came with the important trade-off of poor classification utility and, in turn, low precision in determining with individuals belonged to which class. In turn, the next-best group was the 4-profile solution based on Model B, with equal variances of indicators among profiles, and fixed covariances to zero. This 4-profile solution of Model B appeared best three key reasons: first, it featured lowest AIC and BIC (compared to all other models and solutions, except those of Model D); second, it displayed higher entropy (*entropy* = 0.74); third, despite entropy on its own having been found as a poor criteria for model selection on its own (Tein et al., 2013), upon visual inspection of profiles, the model's 4-profile solution bore great resemblance with prior solutions in the extant person-centered literature of mindfulness (Bravo et al., 2016b; Kimmes et al., 2017; Pearson et al., 2015b). Figure 1 illustrates the 4-profile solution, with standardized means across the five facets of mindfulness. Specifically, this 4-profile, empirically derived model featured clusters of included classes very similar to those found in earlier studies (e.g., *judgmentally observing*, a *nonjudgmentally aware*, as well as a *moderate mindfulness* and a *high-mindfulness* profiles). In light of these findings, we favored and selected this four-profile solution of Model B across the subsequent analyses.

Figure 1: Line graph indicating the 4-class solution featuring standardized mean values and each of the five facets of mindfulness as the LPA indices.



Note. Obs: Observing; Nonj: Nonjudging: Act: Acting with Awareness; Desc: Describing; NonRe: Non-Reacting. Bars represent 95% Confidence Intervals around the standardized mean value for a given indicator. Profile 1: Judgmental Observing (29%); Profile 2: High Mindfulness (19.3%); Profile 3: Nonjudgmental Aware (14.4%); Profile 4: Average Mindfulness (37.3%)

Table 3 summarizes the mean scores and standard deviations of each of the mindfulness facets among the four profiles. Higher scores indicated higher levels across mindfulness indicators. Overall, 29% of the sample (435 participants) displayed average scores of observing and of non-reacting (i.e., *z* scores ranged from .08 to -.16), but lower levels of nonjudgment, acting with awareness, and describing (i.e., *z* scores ranged from -.93 to -.61). Similar to results found in earlier studies, we labeled this class as "*judgmental observing.*" Secondly, 19% of our sample (289 participants) showed the highest indices of nonjudging, acting with awareness, describing, and non-reacting (i.e., *z* scores ranged from .60 to 1.47), yet average levels of observing (z = .022); we labeled this group "*high mindfulness*." Thirdly 14% of our sample (216 participants) demonstrated average levels of nonjudging and acting with awareness (i.e., *z* scores ranged from .015 and .013), but low levels of observing, describing, and non-reacting (z scores ranged from -.131 to -.088). Similarly to earlier researchers (e.g., Bravo et al., 2016), we labeled this profile "*nonjudgmentally aware*." Finally, the largest cluster comprised 37% of our sample (559 participants) and showed an average score across all five indicators (i.e., *z* scores ranged from .32 to -.009). We called this profile *average mindfulness* group.

Table 3: Standardized Means and Standard Deviations of the FFMQ subscales for each profile in the LPA

	Profile 1 (29%)	**Profile 2 (19.3%)**	**Profile 3 (14.4%)**	**Profile 4 (37.3%)**
	Judgmental Observing	High mindfulness	Nonjudgmentally Aware	Average mindfulness
	M (*SD*)	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)
Observing	0.08_{a} (0.67)	0.22_{ab} (0.98)	-1.31_{c} (1.28)	0.32_{b} (0.63)
Nonjudging	-0.86_{a} (0.46)	0.97_{b} (0.83)	0.15_{c} (1.07)	0.11_{c} (0.79)
Acting with Awareness	-0.93_{a} (0.42)	1.47_{b} (0.44)	0.13_{c} (1.03)	-0.09_{d} (0.48)
Describing	-0.61_{a} (0.66)	1.01_{b} (0.58)	-0.88_{c} (1.18)	0.29_{d} (0.66)
Nonreacting	-0.16_{a} (0.75)	0.60_{b} (0.78)	-1.24_{c} (1.24)	0.30_{d} (0.66)

Means sharing a subscript in a row indicate they were not significantly different from each other (i.e., $p > 0.05$) using Tukey's HSD correction for multiple comparisons.

The third aim of our study was to determine whether mindfulness profiles differed in measures of psychopathology, positive psychology, and spirituality. To compare the various groups across these indicators, we performed one-way ANOVAs adding the categorical variable of profile membership (1, 2, 3, or 4) as our independent variable and each distal outcome as a dependent variable. Results from omnibus tests suggested there were significant differences among profiles on all measures of both psychopathology and of well-being. We also found significant omnibus difference in overall spirituality measure (i.e., Delaney spirituality scale) across the four profiles. Table 4 summarizes the means, the standard deviations, and the *F* statistic comparing means across profiles of mindfulness.

Table 4: Means and Standard Deviations for Standardized Outcome Measure by Profile and F-Statistic of ANOVA tests.

	Judgmental Observing	High Mindfulness	Nonjudgmental Aware	Average Mindfulness	F
Psychopathology	-	-	-	-	-
Anxiety Symptoms	0.62_a (1.08)	-0.57_b (.56)	0.12_c (1.12)	-0.24_d (0.76)	123.67*
Depression Symptoms	0.64_a (1.07)	-0.63_b (0.56)	0.20_c (1.12)	-0.25_d (0.72)	143.54*
Negative Emotion	0.57_a (1.20)	-0.53_b (0.53)	0.05_c (1.04)	-0.20_d (0.74)	93.44*
Positive Psychology	-	-	-	-	-
Gratitude	-0.38_a (0.93)	0.51_b (0.88)	-0.35_a (1.14)	0.16_d (0.88)	66.47*
Self-Compassion	-0.58_a (0.74)	0.87_b (0.90)	-0.46_a (1.09)	0.19_d (0.78)	196.51*
Life Satisfaction	-0.28_a (1.00)	0.44_b (0.90)	-0.26_a (1.03)	0.08_d (0.92)	38.14*
Subjective Vitality	-0.36_a (0.93)	0.67_b (0.80)	-0.52_a (1.16)	0.14_d (0.83)	99.40*
Perc Social Support	-0.30_a (0.95)	0.52_b (0.84)	-0.35_a (1.13)	0.10_d (0.92)	55.46*
Positive Emotion	-0.27_a (0.93)	0.55_b (0.93)	-0.48_a (1.01)	0.11_d (0.91)	63.19*
Spirituality	-	-	-	-	-
R/S Importance	2.13_a (1.12)	2.60_b (1.26)	2.06_a (1.13)	2.21_a (1.20)	11.99**
Religious-Meaning	-0.07_a (0.94)	0.35_b (1.07)	-0.20_a (0.93)	-0.04_a (0.99)	16.23*
Personal Spirituality	-0.14_a (0.91)	0.47_b (0.98)	-0.47_c (0.99)	0.05_d (0.96)	43.81*
Religious-Struggle	0.33_a (1.05)	-0.40_b (0.87)	-0.01_c (1.05)	-0.04_c (0.90)	33.83**
Age	31.54_a (8.99)	38.66_b (12.21)	34.63_c (10.99)	35.79_c (10.87)	27.70**

Note. $*p < 0.01$; Anxiety Symptoms: GAD-7: Generalized Anxiety Disorder-7 Questionnaire; Depression Symptoms: PHQ-9: Patient Health Questionnare-9; Negative Emotion: PANAS-NA: Negative Affect; Gratitude: Gratitude Scale;; Self-Compassion: Self-Compassion Scale; Life Satisfaction: Satisfaction with Life Scale; Subjective Vitality: Subjective Vitality Scale: Perc Social Support: Perceived Social Support; Positive Emotion: PANAS-PA: Positive Affect; R/S Importance: Religious / Spiritual Importance; Rel-Meaning: Religious Meaning Scale; Spirituality: Delaney Spirituality Scale. Means sharing a subscript in a row indicate they were not significantly different from each other (i.e., $p > 0.05$).

The *high mindfulness* profile was associated with the healthiest and highest levels of positive psychology indicators (i.e., subjective vitality, life satisfaction, positive emotion, self-compassion, and gratitude; z scores ranging from 0.51 to 0.87), spirituality (i.e., religious/spiritual importance, and personal spirituality *z* scores ranging from 0.35 to 0.47), and the lowest levels of depression, anxiety, and negative emotions (*z* scores ranging from -0.53 to -0.63). Secondly, the *average mindfulness* group correlated with the second highest levels of positive psychology (z scores ranging from 0.08 to 0.19), the second lowest levels of anxiety and depression (z scores ranging from -0.20 to -0.25), and average levels of spirituality (z scores from -0.04 to 0.05). Third, the *nonjudgmentally aware* profile was associated with average levels of negative affect and psychopathology (*z* scores ranging from 0.05 to 0.20), but, for the most part, levels of positive psychology and spirituality that not statistically different from those of the most anxious and depressed group (with z scores ranging from 0.57 to 0.62): the *judgmental observing* profile. In sum, the *judgmental observing group* demonstrated the highest levels of depression, anxiety, negative affect, and religious struggle. Specific z-scores per variable and group, as well as comparisons of significance, can be viewed on Table 4. Finally, to assess for the potential positive association between age and mindfulness highlighted in previous studies (e.g., Mahlo & Windsor, 2021), we also performed a series of post-hoc ANCOVAs, where we entered age as the covariate. Even after controlling for age, we found that differences that had been found to be significant in the series ANOVA remained significant within the ANCOVA framework when age was controlled for. As a result and for simplicity, we maintained our report of the ANOVA results instead.

Cross-tabulation and ANOVA analyses of demographic characteristics of each sample revealed some salient demographic differences among our classes. For instance, the *high mindfulness* class was the oldest group among all other profiles (M = 38.66, SD = 12.21), while the *judgmental observing* tended to be the youngest among profiles (M = 31.54, SD = 8.99; F = 27.70, $p < .001$). Post-hoc comparisons indicated no significant age differences between the *nonjudgmental aware* and the *average mindfulness* groups (t = 1.36, p = .525). Regarding how important participants across profiles regarding religion or spirituality in their lives, the *high mindfulness* profile expressed the highest degree of importance (M = 2.60, SD = 1.26) compared to all other three groups (F = 11.99, p < .001). Post-hoc analyses suggested no statistical differences among other groups. We have also assessed gender differences and differences in meditation and mind-body practice experience among the different profiles. Chi-square tests of independence were conducted for each of the two aforementioned variables, with all expected cell values frequencies greater than five. There was a marginally significant association between gender and profile membership $\chi2(3) = 7.946$, p = .047. The association was small (Cohen, 1988), Cramer's V = 0.073. Further investigation of the plot of adjusted standardized residuals in the chi-square procedure revealed that the *judgmental observing* class present with more males (54%, adjusted standardized residual = 2.7) than females (46%, adjusted standardized residual = - 2.7) than expected. For meditation practice, we also found a significant association between profile membership and mindfulness meditation practice $\chi2(3) = 23.918$, p < .001, although the association was small, Cramer's V = .127. Overall, participants in the *high mindfulness* profile were significantly more likely to endorse *having* a meditation practice (adjusted standardized residual = 3.3) than not; individuals in the *nonjudgmental aware* were significantly less likely to endorse having a meditation practice (adjusted standardized residual = -3.7). Finally, we also found a significant association between mindfulness profile membership and mind-body practices $\chi2(3) = 15.565$, p = .001, of a small magnitude (Cramer's V = .102). Taken together, these results suggest that, as expected, participants in the *high mindfulness profile* are more likely to report having a contemplative meditation practice.

Discussion

The present study replicated and extended findings from earlier person-centered, latent profile analysis studies of mindfulness among participants from a large and diverse U.S. sample. We used data from 1,499 participants to examine unique profiles of individuals based on self-report scores of each of the five dimensions of mindfulness (i.e., observing, nonjudging, acting with awareness, describing, and non-reacting). Like previous studies, ours was guided by the model-based framework of latent profile analysis to identify and plot the resulting groups of participants. Overall, our findings replicated those of previous studies, showing four distinct profiles of mindfulness: 1) a *judgmental observing,* 2) a *high mindfulness,* 3) a *nonjudgmental aware,* and finally, and 4) *average mindfulness* (Bravo et al., 2016b; Ford et al., 2020; Kimmes et al., 2017; Pearson et al., 2015) profiles, corroborating the possibility of distinct *styles of trait mindfulness*. In sequence, we replicated earlier findings that suggested that a *high-mindfulness* profile would correlate with the lowest anxiety, depression, and negative affect; that an *average mindfulness* group would display average scores of depression and anxiety, followed by the *nonjudgmentally aware*, and that the *judgmental observing* group would display the highest indices of psychopathology. Such results are consistent with the extant literature linking high judgment and self-criticism with depressive and anxiety symptoms (Cannon & Weems, 2010; Dunn et al., 2009; Scheele et al., 2013). In turn, outcomes among positive psychology and spirituality indicators were less clear and straightforward. While the *high mindfulness* profile correlated with the highest level of report on positive psychology and spirituality, and the *average mindfulness* group correlated with the second-best levels of positive psychology and spirituality, across some outcomes, the *nonjudgmental aware* and the *judgmental observing* displayed a set of mixed findings. For example, these two groups showed no significant differences in positive psychology indicators, such gratitude and self-compassion, life satisfaction, subjective vitality, perceived social support, and positive emotion. Regarding spirituality, these two groups showed no significant differences in religious meaning and religious-spiritual importance, while the judgmental observing had significantly higher religious struggle, but also a relatively higher overall measure of overall spirituality. In addition, because earlier empirical studies have found mindfulness to increase with age (Greeson et al., 2011, 2015), it is also interesting to note that these significant differences in psychopathology continued to hold even after we controlled for age. That is, merely being older (and thus more mindful), did not in itself explain the differences in psychopathology, positive psychology, and spirituality among the four profiles.

Taken together, our findings point to a relatively clear inter-profile distinction in psychopathology scores, where a *high-mindfulness* group performs best, and a *judgmental observing* group performs the worst, and to more nuanced inter-profile distinctions in positive psychology and spirituality. The highest level of spirituality was found among the *high mindfulness* group, suggesting that spiritual awareness may carry with it a capacity for being present and accepting of others. *High mindfulness* profile participants showed elevations in transcendent awareness of the self, nature and a Higher Power, reductions in spiritual or religious struggle, and elevations in the single item of personal importance of personal spirituality or religion shown to be predictive of physical and mental health (Koenig et al., 2021). The opposite was found as well, in that the two uneven profiles of mindfulness showed lower levels of personal spirituality or religion, less transcendent awareness of self, nature and a higher power, and more spiritual struggle. Of the two profiles of uneven mindfulness, the judgmental observing group appeared to have more religious struggle, but to also endorse higher overall spirituality than the non-judgmental aware. One possible explanation for this finding may be that people from the judgmental observing group may turn more to spirituality for balance or coping.

Regarding contemplative practice, the high mindfulness group was also more likely to engage in contemplative practices, including Vipassana or Zen meditation or centering prayer. These findings both corroborate earlier studies that linked mindfulness with spirituality and add nuance to the presentation among other profiles (Carmody et al., 2008; Greeson et al., 2011). Furthermore, mindfulness profiles also appeared particularly robust in the current sample, with each profile including at least 14% of our sample. By contrast to earlier studies that found some groups to fit, of concern, only 6% of participants into *judgmental observing* and *nonjudgmental aware* profiles. This higher membership strengthens the empirical support for the prevalence of these profiles, and may reflect our use of a broader range of adult age groups, in contrast to earlier studies which focused exclusively on college students (e.g., Bravo et al., 2016; Pearson et al., 2015).

All in all, our study builds on earlier person-centered mindfulness studies and adds further evidence to the validity of unique *profiles*, or *styles* mindfulness in the adult population. As expected, mindfulness does not present equally among all people: some people are better able to observe their experience, yet display heavy judgment; others are less judgmental, but also less attentive; and others show a fine synergy among all five dimensions of mindfulness and, as a result, display the highest levels of mental health, spirituality, and positive psychology. Interventions and mindfulness programs may benefit from capitalizing on these unique presentation and individual profiles, and adjust their curriculum to fit participants' profiles. Participants who tend towards the judgmental profile may receive instructions that emphasize acceptance, while participants with lesser tendency to *observe* may benefit from mindfulness activities that emphasize somatic awareness, for example. With the surge in personalized mindfulness training over apps and online, these adjustments may lead to both enhancements in the overall effectiveness of programs, and conform to an increasing person-centered and customized learning experience.

Limitations and Recommendations for Future Research

Our study limitations include the use of cross-sectional and self-report data. As such, our study cannot speak for causal relations or for precedence among overall well-being, psychological adjustment and spirituality as these relate with the profiles of mindfulness. Future research might include investigation of the longevity and the stability of these profiles over time, potentially conducted through a longitudinal design using latent transition analysis. Apparent cohort differences in mindfulness profile by age suggest that a longitudinal study disentangle cohort effects from those of adult development. Considering that the *high mindfulness* profile is the oldest, valuable research questions on the developmental trajectories or cohort-differences remain open and unanswered. Future research further might explore cross-cultural comparisons and profile analyses among non-Western participants and samples, as this would help us understand whether these profiles are universal or constrained to the cultural context of Western cultures. That is especially important given that earlier studies have focused exclusively on North American or European samples.

Moreover, several statistical approaches have been developed to derive profiles. These approaches include hierarchical cluster analysis, bi-factor models and exploratory SEMs as well as mixture-modeling derives techniques, such as latent profile analyses. Several statistical techniques have also emerged in recent years aimed at performing group-wise comparisons among profiles (e.g., ANOVAs, and bias-corrected three-step methods via maximum likelihood and BMC). Building on the methodology used by several of the previous person-centered studies, our study also relied on latent profile analysis. We then followed our analysis using a series of ANOVAs, with added corrections for the multiple comparisons performed. This ANOVA approach is part of the standard classify-analyze framework to LPA (Clogg, 1995). In our study, we used the maximum probability assignment framework to obtain profile classification (Nagin, 2005) and this method categorically assigns participants to the profile for which they have the highest posterior probability of membership (Goodman, 1974, 2007). Other approaches reported in some of the earlier studies (e.g., Bravo et al., 2016; Pearson et al., 2015,) have relied instead on pseudo-class multiple imputations and on subsequent Wald tests. While adding in probabilistic information to their models, the pseudo-class model that relies bootstrapped multiple-drawing framework has been shown to be more biased than maximum-probability assignment approach (Bray et al., 2015b). Given our profiles' entropy of levels and reasonable mean probability of class membership also above .70, we still proceeded the use classify-and-analyze ANOVA framework. However, we recognize that alternative statistical approaches to compare distal outcomes exist (e.g., three-step approaches, including Maximum Likelihood and BMC) have been growing in popularity and in statistical robustness. While our analytic software (i.e., tidyLPA) did not yet contain the integrated framework for three-step procedures, given the number of other recently published studies using the classify-and-compare approach, we maintained more traditional ANOVA techniques. Still, we believe our findings remain consistent and serve as an important initial investigation for spirituality across profiles of mindfulness. We recommend that future studies continue to document differences that emerge across statistical procedures, and continue to standardize and converge on analytic frameworks and methods, considering that some subtle but important differences emerged when some authors (e.g., Ford et al., 2020). Greater consensus on the techniques used and to be used will benefit readers and enhance the replicability of findings.

Conclusions

Our findings replicate the four clusters, profiles, or groups of mindfulness based on the FFMQ found in earlier studies. We also show how they differ and how they are alike across indices of positive psychology, depression, anxiety, and spirituality. Overall, these findings provide further evidence suggesting that having higher mindfulness goes hand in hand with spiritual awareness, well-being, and mental health. Although having moderate levels or even being lower in judgment can be protective, our data suggest that it is the synergy and the integration of all five dimensions that has consistently appears to be part and parcel with the healthiest and most positive outcomes. Treatment studies, mindfulness programs and curricula might, therefore, consider helping balance across the dimensions of mindfulness. Interventions might include adaptations and adjustments to individuals of the *judgmental observing* profile, reinforcing among them patterns of radical acceptance and compassion; to *non-judgmental aware*, practitioners and researchers might add a larger scope of exercises meant to cultivate awareness and mindfulness of one's environment.

Chapter 2B: Self-Compassion Profiles in the United States are Differentially Associated with Well-Being, Psychopathology, Contemplative Practice, and Spirituality

Abstract

Self-compassion has been associated with numerous benefits. The most popular measure of self-compassion includes three dialectic pairs: *self-kindness* and *self-judgment*, *mindfulness* and *over-identification*, and *common humanity* and *isolation*. Although these dimensions of self-compassion are interrelated, few studies have examined the heterogeneity of self-compassion profiles. With data from 1,499 U.S. adults, we performed a series of LPAs to examine profiles of self-compassion and their differential associations with well-being, spirituality, and psychopathology. Results supported a three-profile solution of self-compassion, including an *Average Self-Responding*, a *Self-Berating: Uncompassionate-Judgmental*, and a *Self-Loving: Compassionate-Nonjudgmental* profiles, each with differential levels of well-being, spirituality, contemplative practice, and psychopathology. The *Self-Loving* group presented with the highest levels of well-being, spirituality, and the lowest levels of depression and anxiety; the *Self-Berating* reported the highest levels of distress and the lowest markers of well-being. Our results provided partial support for the standard conceptualization of the self-compassion scale as composed of bipolar continua along its three dialectic pairs. However, unequal presentations among positive and negative dimensions across the three profiles challenge the view that the elements of self-compassion fall on a perfectly linear bipolar continuum. Future research may parse out the general and the incremental validity of distinct self-compassion facets and the development of self-compassion profiles over time.

Self-compassion has emerged as a popular construct (Neff 2003a; Neff, 2003b). Defined as an attitude of kindness and nonjudgment toward oneself during moments of suffering and shortcomings (Neff, 2003), self-compassion has been associated with various positive health outcomes (Ewert et al., 2021; Ferrari et al., 2019; MacBeth & Gumley, 2012; Phillips & Hine, 2021). Multiple systematic reviews and meta-analyses suggest that self-compassion is associated and may be casually linked with greater well-being and life satisfaction (Zessin et al., 2015), with lower rates of stress and anxiety (MacBeth & Gumley, 2012), with greater adaptive coping against adversities (Ewert et al., 2021), and with improved physical health and health behavior outcomes (Phillips & Hine, 2021). Given the robust benefits associated with self-compassion, self-compassion has been incorporated into a growing number of programs and interventions, including the Mindful Self-Compassion program (MSC; Neff & Germer, 2013), the Compassion-Cultivation Training (CCT; Jazaieri et al., 2013), the Compassion-Focused Therapy (CFT; Gilbert, 2009, 2014), among others. Self-compassion has also been key to acceptance-based approaches of third-wave cognitive behavioral therapies and continues to influence interventions, research and psychotherapy approaches (Neff, 2023; Neff & Germer, 2022). Alongside the empirical evidence demonstrating its various benefits, the self-compassion scale (SCS; Neff, 2003) has been scrutinized in recent years by researchers who continue to debate the most valid way to define and operationalize self-compassion.

Among the prominent researchers and proponents of self-compassion, Neff (2003b) defined self-compassion as three dialectic pairs: 1. self-kindness (vs. self-judgment), 2. common humanity (vs. self-isolation), and 3. mindfulness (vs. over-identification; Neff, 2003a; Neff, 2003b). In Neff's popular conceptualization, self-kindness means "extending kindness and understanding to oneself rather than harsh self-criticism and judgment" (2003, p. 224); common humanity means “seeing one’s experiences as part of the larger human experience rather than as separating and isolating,” (2003, p. 224), and mindfulness means “holding one’s painful thoughts and feelings in balanced awareness rather than over-identifying with them” (2003, p.224). Despite its widespread and prominent use, Neff’s Self-Compassion Scale (SCS; Neff, 2003b) has been questioned. Muris & Otgaar (2022) examined the psychometrics and the conceptual underpinnings of the SCS (Neff, 2003b) and questioned whether the SCS indeed captures self-compassion per se while including reverse-scored, negative elements of self-judgment. Reviewing prior research, Muris & Otgaar (2022) warned that the reverse-scored, negative subscales capturing “isolation,” “self-judgment,” and “over-identification” (i.e., collectively considered “self-coldness” or “uncompassionate self-responding” [USR]) may not capture self-compassion per se, but, instead, vulnerabilities to psychopathology akin to neuroticism; these vulnerabilities to psychopathology, the authors claimed, may not be the opposite of *self-compassion*, but something else instead. As a result, Muris & Otgaar (2022) advisec against lumping positive and negative reverse-scored subscales of self-compassion into a single score, as has been common practice in the literature, and emphasized that combining positive and negative elements may be misleading and might inflate an erroneous amalgamation of *protection* from psychopathology (i.e., self-compassion) with *vulnerability* to psychopathology (i.e., neuroticism). Muris & Otgaar (2022) then spearheaded a reexamination of the self-compassion scale, and advised researchers to measure positive self-compassion separately, instead of combining it with its theoretical opposite (i.e., uncompassionate self-responding). Other researchers corroborate this point, and provide further evidence for the distinguishability of positive and negative subscales within the SCS.

Earlier on, López and colleagues (2015) were unable to replicate the theorized six-factor latent structure of the SCS and found evidence, instead, for a two-factor solution with a positive (i.e., compassionate self-responding) and a negative (i.e., self-criticism, uncompassionate self-responding) dimensions. Like Muris & Otgaar (2022), López and colleagues (2015) argued that, because of the differential associations between these two factors with neuroticism, rumination, and depression symptoms, a total SCS sum score that inadvertently combined—and therefore conflated—the two distinct factors might be misleading. The authors advised researchers to focus only the positive items (i.e., self-kindness, mindfulness, and common humanity as "self-compassion"). Muris & Petrocchi (2017), also questioned the bifactorial structure of the self-compassion scale and argued that the negative dimension of the SCS might measure vulnerability to psychopathology rather than the theorized opposite of self-compassion *per se*. Incorporating reverse-scored negative items into a single, undifferentiated scale, Muris & Petrocchi (2017) argued, might place an undue weight on *vulnerability* to psychopathology rather than on self-compassion itself. Examining self-compassion data from adolescents in particular, Muris and colleagues (2021) later found that adolescents with "higher levels of total self-compassion display lower levels of neuroticism and vice-versa" (p. 245), and that this negative association "revealed that only USR [uncompassionate self-responding, i.e., the negative aspects of self-compassion] accounted for a significant proportion of the variance in internalizing symptom scores" (p. 245). The authors noted that compassionate self-responding might confer smaller-than-thought protection against psychopathology, thus diluting propositions pioneered by Neff (2003b) about the extent of self-compassion positive mental health impacts.

In response, Neff (2003, 2016, 2019) and colleagues (2018) have insisted on the psychometric relevance and on the imperative of using a wide range of self-compassionate and uncompassionate experiences for a valid and reliable assessment of self-compassion. Neff (2003b) initially encouraged the use of an integrated, unified sum-measure of self-compassion including positive and negative dimensions synthesized as one. Recently, Neff (2022) argued that the positive and the negative dimensions of self-compassion form a greater whole through a single bipolar continuum; as a bipolar continuum, Neff (2022) argued, self-compassion positive and negative subscales may be seen as akin to temperature, with a positive side measuring "warmth" (i.e., self-compassion per se) and a negative aspect measuring "cold" (i.e., uncompassionate self-responding), which combined form a single, unified, bipolar continuum of self-compassion. Neff (2022) argues that splitting bipolar continua into discrete halves is misleading, just as splitting temperature scales into two separate scales might be misleading, since temperatures are all part of a single continuum. Neff (2022) noted that, to avoid the "fallacies" of traditional factor analytic approaches that seem to pick on two separate and distinct factors, more robust and sophisticated approaches, such as bifactor exploratory structural equation modeling (bifactor-ESEM), which may be best designed to capture and to explore the multidimensional and continuum-like nature of self-compassion, are recommended instead. Neff (2022) argued that bifactor ESEM approaches have been shown to better account for and model the structure of multidimensional constructs involving hierarchically-ordered and conceptually-related subscales (Morin et al., 2016) such Neff's Self-Compassion Scale (Neff, 2003b).

Informed by this debate and by the lack of consensus in the measurement of self-compassion, our empirical study proposes to examine self-compassion not through standard variable-centered approaches (e.g., exploratory, confirmatory factor analyses and bifactor ESEM) but through person-centered approaches as well. Person-centered approaches not only examine the distributions and interrelations of specific scales, but how those scales may coalesce and aggregate among large groups. Traditional variable-centered approaches may aid in resolving the nuances of this debate, yet they may be insufficient on their own, because regressions, correlations, and factor analyses in general make an important—but underexamined—assumption: that people fit into a single, homogeneous distribution of self-compassion. What if, instead, there were multiple distributions of indices of self-compassion, where not all people displayed “average,” “high,” or “low” levels along the three interrelated bipolar aspects of self-compassion, but instead followed distinct distributions across each of those aspects? The present study aims to bridge these lacunae by employing latent profile analyses to examine potential unique distributions and naturalistic occurrences of self-compassion among people in the United States. Such framework may elucidate how distinct aspects of self-compassion relate to each other and across diverse groups of people and may help us understand whether profiles demonstrate the theorized bipolar continuum indicated by Neff (2022) or whether profiles present with varied distributions that might indicate, instead, relative independence and further differentiation between compassionate and uncompassionate aspects of the SCS. Unique to our research, our study also aimed to examine the differential associations of such potential profiles of self-compassion with spirituality, well-being, and psychopathology. Next, we review the main findings and the main limitations of prior person-centered studies of self-compassion.

Prior Person-Centered Approaches to the Study of Self-Compassion

Few empirical studies have examined profiles of self-compassion. In light of the inconclusive debate on the most valid and reliable approach for measuring self-compassion, such gap calls for further research. In fact, despite the exponential surge in self-compassion research, most prior studies have assumed that self-compassion follows a homogeneous distribution in the population at large (Muris & Otgaar, 2022), with some presenting as high-scoring and other as low-scoring across various facets of self-compassion, with single-number mean score as the summary of this complex construct. Although a helpful heuristic, this a single-score index may dilute the multidimensionality of self-compassion and omit with the potential heterogeneity among its various positive and negative dimensions. What if some people presented with greater *self-kindness* and *common humanity*, but with lower *mindfulness* than others? Person-centered approaches may allow us to examine these and other important questions pertaining to naturalistic distributions and mindsets of self-compassion across the population at large. Several other advantages stand out to encourage researchers to explore and use person-centered methods such as latent profile analyses (LPA).

Across research studies involving other multidimensional constructs like self-compassion, person-centered techniques have made clear the fallibility of the assumption of a single homogenous distribution. Among various constructs in the clinical research literature, one initially thought to represent a single, homogeneous population, have recently been shown to better fit into heterogeneous subgroups. For example, mindfulness, once taken to be a unitary construct comprised of various facets, has been shown to be more multifaceted and more heterogeneous across samples and populations than initially theorized (Bravo et al., 2016; Pearson et al., 2015). De Souza Marcovski & Miller (2022), for example, have recently found evidence for four profiles of mindfulness across adults in the U.S. population, and showed these profiles varied in levels of well-being, psychopathology, and spirituality. A similar, person-centered approach self-compassion may also help elucidate the distinct ways in which groups of people identify with and engage in self-compassionate and in uncompassionate behavior.

On profiles of self-compassion, for instance, using data from a sample of Australian adults, Phillips (2019) found three distinct profiles of self-compassion: 1. a *highly self-compassionate*, 2. a *moderately self-compassionate*, and 3. an *uncompassionate self-responding* groups. Phillips (2019) found that the *highly self-compassionate* and the *moderately self-compassionate* groups presented greater psychological well-being and lower levels of anxiety. As expected, Phillips (2019) also found that the *uncompassionate self-responding* profile was associated with lower levels of psychological well-being and with greater levels of depression and anxiety. Of interest to the psychometric debate on the self-compassion (Muris et al., 2021; Muris & Otgaar, 2022; Neff, 2022), Phillips (2019) interpreted the contrast among these three profiles, or "mindsets," of self-compassion as supportive of Neff's (2003) theory that positive and negative items serve as mirror opposites of each other—both help estimate a total score of self-compassion.

By contrast, Ulrich-French & Cox (2020) examined self-compassion profiles among college students and found not three, but sets of four and of five profiles of self-compassion, depending on the specific college student sample studied. College-based profiles included 1. an *uncompassionate*, 2. a *compassionate*, 3. a *high-responding*, 4. an *indifferent group* in one college sample, and 5. an *average self-compassion* in another. Interestingly, the "*high-responding"* and the "*indifferent*," presented with elevations in both self-compassionate and uncompassionate dimensions, or with low scores in both compassionate and uncompassionate aspects of the self-compassion scale. Such results suggest there might be more independence and dissociation among theorized opposites than initially theorized by Neff (2003b).

Building on findings by Ulrich-French & Cox (2020), Wu and colleagues (2021) studied Chinese college students and also found evidence for five profiles of self-compassion, including 1. a *high self-coldness/low self-compassion*, 2. a *high self-compassion/low self-coldness*, 3. an *average self-compassion/average self-coldness*, 4. a *low self-compassion/low self-coldness,* and 5. a *high self-compassion/high self-coldness* profiles. These five Chinese-based profiles further reinforced the potential dissociation between compassionate and uncompassionate dimensions of self-compassion, since two of them featured elevations among opposites (i.e., such as in “self-cold” and “self-compassionate,” on the one hand, and in “low in self-compassion,” and “low in self-coldness” on the other).

Most recently, Wei and colleagues (2023) also explored the reliability and validity of self-compassion profiles using data from cancer patients in China, and found further support to the dissociation and relative independence among positive and negative aspects of self-compassion. Their profiles included: 1. an *average self-compassion*, 2. a *high self-compassion*, 3. a *low self-compassion/low self-coldness*, 4. a *high self-compassion/high self-coldness*, and 5. an *average self-compassion/high self-coldness*. Like Wu and colleagues (2021), Wei and colleagues (2023) also found profiles with co-occurring elevations or low levels in opposite dimensions of self-compassion at the same time. This apparent dissociation might appear to bolster the main argument by Muris and colleagues (i.e., Muris et al., 2021; Muris & Otgaar, 2022; Muris & Petrocchi, 2017), that compassionate and uncompassionate self-responding ought not to be taken as part two parts of single, one-dimensional continuum. Combined, most prior person-centered studies challenge Neff’s (2003, 2019) bipolar-continuum theory of self-compassion were it not for some key limitations highlighted below.

First, most prior studies on profiles of self-compassion used only college students. Both Ulrich-French & Cox (2020) and Wu and colleagues (2021) only included undergraduate students, with a mean age 20. The limitations associated with generalizing from studies conducted exclusively on college student samples have been well established, and include lack of generalizability, issues with reliability, and reproducibility of findings even among other college student samples (Ashraf & Merunka, 2017; Peterson & Merunka, 2014). Prior research has also demonstrated that self-compassion tends to follow an inverted u-shaped curve, generally rising with age and peaking around age 77 (Lee et al., 2021). Older, larger, and more age-diverse samples may be more likely to capture generalized—and therefore more widespread—naturalistic presentations of self-compassion mindsets, given the wider range of representation capturing the lifespan. Although representing only a small sliver of age, such as college-age students and young adults only might, on the one hand, allow for more concentrated and fine patterns (such as found by Ulrich-French & Cox, 2020; Wu et al., 2021), the exclusion of other a wider age range may risk the external validity and generalizability of findings. By examining an age-diverse sample based in the United States, our study addressed and accounted for this limitation.

Second, cross-cultural differences between Westerners, on the one hand, and Chinese and Asian participants, on the other, may explain the heterogeneity of findings to date. In fact, prior research suggests that East Asians and Asian-Americans may perceive and relate to self-compassion concepts differently from their Western counterparts (Zhao et al., 2021). Zhao and colleagues (2021), for example, found that Chinese adults hold a more dialectical worldview and nuanced view of self-compassion, noting the inherent dialectics within each construct, such as that "self-kindness" might encompass both one's ability to self-soothe but also as a form of self-pity; that mindfulness as an awareness that might reinforce wise decision-making but also that could lead to emotional suppression. Moreover, previous factor analyses among Chinese and East Asian participants have also found differential factors and factor structures, with one study finding four, rather than six, factors of self-compassion among Chinese students, including self-kindness, common humanity, mindfulness, on the usual positive end, and a single, combined negative factor on the negative end (Tsai, 2015). Such differences among Chinese respondents and in the distinct perception that East Asians may hold about the components of self-compassion (Zhao et al., 2021) might partly explain the heterogeneity of self-compassion profiles observed in the study by Wu and colleagues (2021) and Wei and associates (2023). By examining an age-diverse U.S. sample at large, our study may enrich this cross-cultural debate and transcend the limitations of exclusive college-based findings of previous studies.

Finally, the third notable issue involves constrained sample and reduced profile sizes across previous studies. Such reduced sample and profile sizes carries constraints to the reliability, generalizability, and the external validity of specific profiles in earlier studies. Of note, LPA guidelines discourage researchers from extracting profiles including less than 25 cases (Lubke & Neale, 2006), given potential issues of replicability and generalizability of findings. Despite such guideline, Ulrich-French & Cox (2020), examining college students, extracted an "*indifferent*" profile with a mere 3% of college students (comprising 11 participants) and a "high-responding" profile, including merely 5% of their sample, or 21 participants. The extraction of such small profiles carry potential constraints to their replicability and generalizability. With such low numbers, these dialectic profiles bring salient issues regarding the overall validity and reliability, and demand further study, which ours undertook.

Our empirical study therefore aims to extend prior research on profiles of self-compassion using data from a large, age-diverse, U.S.-based adult sample in order to shed light on whether self-compassion may be best captured through a single homogenous distribution of self-compassion, or through a more nuanced heterogeneous distributions instead. Our main goals were to elucidate the nature of self-compassion profiles, to provide answers that may shed additional light on the debate between Neff (2022) and Muris & Otgaar (2022), and, for the first time, to evaluate the differential association between self-compassion profiles and spirituality. We also aimed to elucidate the ways in which distinct profiles of self-compassion fare across indices of self-compassion as well as of well-being, distress, and contemplative practice. To our knowledge, ours is the first person-centered study to explicitly examine the associations between latent profiles of self-compassion and spirituality. Given growing indications of the association between self-compassion and spirituality (e.g., Stauber & Stutts, 2021), comparing potential profiles of self-compassion with measures of spirituality may be especially informative given the distinct benefits of and correlates of spirituality with well-being (Cheadle & Dunkel Schetter, 2017; Garssen et al., 2021). Ours, thus, to our knowledge, is also the first to examine self-report self-compassion indices with behavioral indicators of contemplative practice, as measured by previous and present practice of mind-body and meditative practices. Such association between self-compassion and measures addressing meditative practices and behavior is key in a field that relies extensively on self-report measures only. In sum, we maintain that a person-centered approach may be key in revealing the hidden nuances of the reliability and validity of the construct of self-compassion as constructed by Neff (2003), and in generating insight into how self-compassion converges with thriving, mental health, and spirituality.

Method

Participants & Procedures

In total, 1499 U.S.-based online participants joined the present study. We recruited all adult participants from Amazon Mechanical Turk (MTurk) using a robust series of data-quality, inspection, and validity controls. Prior to joining our study, participants were informed that they would be asked to complete an online survey that included questions focused on understanding participants' quality of life, well-being, spirituality, and distress. Timed-entries for onset and completion were also evaluated before as participants completed their response. All participants who voluntarily completed the present study were compensated for their time. The present study followed the ethical principles and guidelines outlined in the Belmont Report and according to the Helsinki conventions for ethical standards in human subject research, and it was approved by the Institutional Review Board of Teachers College, Columbia University under protocol 13-065.

Measures

Self-Compassion was measured through the Self-Compassion Scale-Short Form (SCS; Raes et al., 2011). Self-compassion has been defined as "the ability to hold one's feelings of suffering with a sense of warmth, connection, and concern" (Raes et al., 2011). The SCS-Short Form examines the six dimensions of self-compassion, with two items per dimension. These dimensions include *self-kindness*, *common humanity* and *mindfulness* and their respective opposites: self-*criticism*, *isolation*, and *over-identification. Self-kindness* refers to the ability to treat oneself with warmth and compassion in light of failure and adversity; *common humanity* draws on the idea that imperfections are normal and common to the human condition; *mindfulness* refers to being able to remain equanimous and balanced in the face of difficult or upsetting experiences. The three respective negative dimensions are theorized by Neff (2003) as capturing the bipolar opposites of *self-kindness, common humanity,* and *mindfulness*. Although recent debate has raised questions on the best measurement model for self-compassion, (i.e., whether the three negative subscales should indeed be reverse-scored, or whether the positive and negative should be separated as they may imply different constructs altogether addressing *self-compassion* and *vulnerability*; Muris & Otgaar, 2022), in the present study, we did not compute total scores of self-compassion, because for the latent profile analysis (LPA), we needed sum scores for each individual subscale. The *Cronbach's alpha* for each of the two-item subscales varied between .66 to .84, and included the following values: α self-kindness = .66; α mindfulness = .72; α common humanity = .70; α self-judgment = .84, α isolation = .75; α overidentification = .80.

Measures of Negative Affect and Distress

Anxiety symptoms were measured through the Generalized Anxiety Disorder -7 (GAD-7; Spitzer et al., 2006). The GAD-7 is a seven-item instrument that has shown excellent internal consistency and substantial evidence of diagnostic and criterion validity. The GAD-7 is sensitive to varying levels of anxiety, and has been used in and validated with various samples and populations around the world (Spitzer et al., 2006). *Cronbach's* α = .93.

Depressive symptoms were measured through the widely-used Patient Health Questionnaire-9 (PHQ-9; Kroenke et al., 2001). We used this brief symptom scale of depression because the PHQ-9 has shown excellent internal consistency and good evidence of diagnostic and criterion validity among various samples and populations in the U.S. and around the world (Arroll et al., 2010b; Costantini et al., 2021; Kroenke et al., 2001a; Lotrakul et al., 2008b), and because the PHQ-9 is easy to administer. The PHQ-9 offers a brief and effective measurement of depression. *Cronbach's* α = .91.

Negative Affect was assessed through scores in the negative items from the Positive and Negative Affect Schedule (PANAS; Watson et al., 1988). Participants were asked to rate using a 5-item rating scale the degree which they felt a certain distress emotion. These emotions include fearfulness, upset, irritability, distress, etc. In the rating scale provided, 1 meant "very slightly or not at all" and 5 means "extremely." Overall higher scores indicated more pronounced negative affect. *Cronbach's* α = .92.

Measures of Well-Being and Positive Psychology

Gratitude was measured through the Gratitude Questionnaire (Emmons et al., 2003; McCullough et al., 2002). The Gratitude Questionnaire is brief, unidimensional scale, based on a seven-point Likert scale assessing one's gratefulness. Sample items include: "I have so much in life to be thankful for" and "I am grateful to a wide variety of people." Gratitude has emerged as central concept in positive psychology, and appears closely linked with general well-being (Emmons et al., 2003). For example, higher ratings of gratitude have been associated with more frequent positive emotions, higher optimism, life satisfaction, and lower levels of general stress and anxiety (Emmons et al., 2003). *Cronbach's* α = .82.

Satisfaction with Life was assessed through the Satisfaction With Life Scale (SWLS; Diener et al., 1985). The SWLS scale is a widely-used, validated, reliable, and brief five-item instrument measuring one's levels of life satisfaction. Participants were asked to rate items such as "I am satisfied with my life" on a 7-point Likert scale, indicating the degree to which they agree with each statement. Higher scores suggest greater levels of satisfaction in life. *Cronbach's* α = .94.

Subjective Vitality was measured via the Subjective Vitality Scale (SVS; Ryan & Frederick, 1997). The SVS is brief, seven-item instrument assessing aliveness and energy. Sample items include "I feel alive and vital," "I have energy and spirit," "I look forward to each day," "I feel energized." The scale uses a 7-point Likert scale, in which higher scores suggest higher sense of autonomy and self-actualization. Subjective vitality is purported to tap into both somatic and psychological concomitants of energy. *Cronbach's* α = .92.

Perceived Social Support was measured through the Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988). This scale consists of 12 items and examines subjective experiences of support along three distinct contexts: family, friends, and significant other (Zimet et al., 1988). Perceived Social Support has been extensively used and validated, and empirical research suggests that social support serves as an important buffer against difficult experiences and stress (Zimet et al., 1990). *Cronbach's* α = .95.

Positive Affect was measured through the positive items within the Positive and Negative Affect Schedule (PANAS; Watson et al., 1988). The positive items were measured via a 5-point scale examining participants' present experiences with positive emotions. Positive emotions included joyfulness, cheerfulness, contentment, among others. Higher scores suggest more positive present-moment emotional states. *Cronbach's* α = .91.

Measures of Spirituality

Spirituality was measured through the Delaney Spirituality Scale (DSL; Delaney, 2005). The DSL is a widely used, 23-item, instrument examining four interrelated dimensions of spirituality: 1. *ecological awareness* (i.e., "I believe that nature should be respected"), 2. *self-discovery* (i.e., "My life is a process of becoming"), 3. *relational spirituality* (i.e., "I respect the diversity of people"), and 4. *sacred connection* (i.e., "my faith in a higher power/universal intelligence helps me cope with the challenges of my life"). Participants rated using a six-point Likert-scale the degree to which they agree with each statement. We computed an overall sum score inclusive of all dimensions of spirituality to assess a participants' overall sense of spirituality. *Cronbach's* α = .94.

Religious/Spiritual Meaning was measured through a brief instrument developed by Krause (2003a). This six-item questionnaire measures participants' sense that their meaning in life is derived from their faith and spiritual beliefs (e.g., "my faith gives me a sense of direction in my life.") Prior research has shown that religious meaning is associated with life satisfaction, self-esteem, and an optimistic orientation to life (Krause, 2003). We computed a sum score of the six-item questionnaire and utilized such a score in our assessment of religious/spiritual meaning. *Cronbach's* α = .97.

Demographics

We also asked participants for their age, gender, religious background, race and ethnicity, marital status, educational achievement and previous experiences with mindfulness meditation and mind-body practices (e.g., yoga, tai-chi, qigong). The majority of our sample self-identified as White (83.6%), while 8.3% self-identified as African-American, 7.2% self-identified as Latinx/Hispanic; 2% identified as East Asian, 1.4% as Native American, and 0.7% as South Asian. Regarding religious affiliation, 48.5% of our participants self-identified as Christian, 39.2% identified as non-religious, 2.4% identified as Buddhists, 1.3% identified as Jewish, 0.9% identified as Muslim, and 0.5% identified as Hindu. Regarding educational attainment, our sample was comprised of a generally educated group: 9.7% had obtained a graduate degree (e.g., M.S., M.A., doctorate), 33.4% had obtained an undergraduate degree (e.g., B.A., B.S.), 28.9% had completed some college, 11% had obtained an associate degree, 14% had obtained up to a high school diploma, and only 0.7% had not completed high school. Finally, regarding mindfulness and mind-body practices, 15% of our sample reported having a regular mind-body practice such as yoga, chi-gong, tai chi; 17% of our sample reported having a regular meditation practice such as vipassana, mindfulness, Zen, Tibetan, prayer, Transcendental Meditation, etc.; 9% of our sample reported having both a mind-body contemplative practice and practicing meditation. In total, 76% of participants reported having neither a meditation nor a mind-body practice.

Data Analyses

Descriptive Statistics

First, we tabulated and processed our data using SPSS version 27 (IBM, 2021). We examined the demographic profile of our participants, and checked for missing data, outliers, and potential patterns in the missingness of data. We also conducted reliability analyses using Cronbach's alpha through all continuous study variables. Overall, 96.7% of our participants completed all items of the self-compassion scale. There were no noticeable patterns among participants who did not complete all items. Upon visual inspection and analysis, we found no specific patterns in the missingness of our data. To maximize the inclusion of our analyses, we used a simple imputation technique and procedure as described in the *tidyLPA* software documentation (Rosenberg et al., 2019a). We also preserved participants with missing items in the self-compassion scales as we compared profiles across distal outcomes, except in cases in which participants showed missing values specifically on the distal outcomes analyzed. In sequence, we computed and examined the correlation matrix of all subscales of self-compassion. Table 5 summarizes these results.

Table 5: Two-tailed Pearson Correlations of the Six Aspects of Self-Compassion

	Self-kind.	Common Human.	Mindful.	Self-judg.	Isolation	Over-Ident.
Self-kind.	-					
Common Hum.	.605**	-				
Mindful.	.640**	.535**	-			
Self-judg.	-.447**	.288**	-.333**	-		
Isolation	-.363**	-.278**	-.317**	.673**	-	
Over-Ident.	-.385**	-.280**	-.369**	.711**	.765**	-

Note. Self-kind.: self-kindness; Common Hum.: common humanity; mindful.: mindfulness; self-judg.: self-judgment; over-ident.: over-identification.
** $p < 0.001$.

Latent Profile Analyses

Second, we performed a series of latent profile analyses to identify distinct profiles of self-compassion. We used the six sub-scales of the self-compassion scale (short form; SCS-SF; Raes et al., 2011) as our LPA indicators. In the empirical and theoretical literature at large, LPA is known by a variety of names, such as latent class cluster analysis, mixture modeling profile analyses, and mixture modeling. Broadly speaking, LPA fits into the person-centered analysis techniques and modeling. Following general guidelines for LPA (e.g., Pastor et al., 2007), we used the six sum scores of each dimension of self-compassion as the indicators for our LPA. We then used the R package *tidyLPA* (version 1.0.8; Rosenberg et al., 2019b) for our latent profile analyses. This package expands and simplifies the *mclust* (Scrucca et al., 2016a) for R, which is used for mixture modeling and cluster analyses. Moreover, *tidyLPA* allows researchers to derive mixture models and to conduct cluster and latent profile analysis using open-source and free software and provides researchers with additional control in designing LPA models by allowing for variances and covariances to either freely vary across models, to be fixed at zero, or set as equal among emerging profiles. This freedom allowed us to compare several models and to search for the most parsimonious and best-fitting profile solutions. A thorough overview and summary of the various parameterization models in LPA may be read in the review by Pastor and colleagues (2007). Based on the LPA guidelines recommended by Pastor and colleagues (2007), we first examined the fit indices and model solutions from the various parameterizations, allowing variances and covariances to vary or to remain equal, and covariances to vary, to remain equal, or to be kept at zero across several models. Generally, lower indices of AIC and BIC indicate better-fitting models, while higher entropy indicates greater classification accuracy and precision when estimating profile membership for participants. Table 6 summarizes the various model indices and goodness-of-fit information across two computable parameterizations: Model 1 and Model 3.

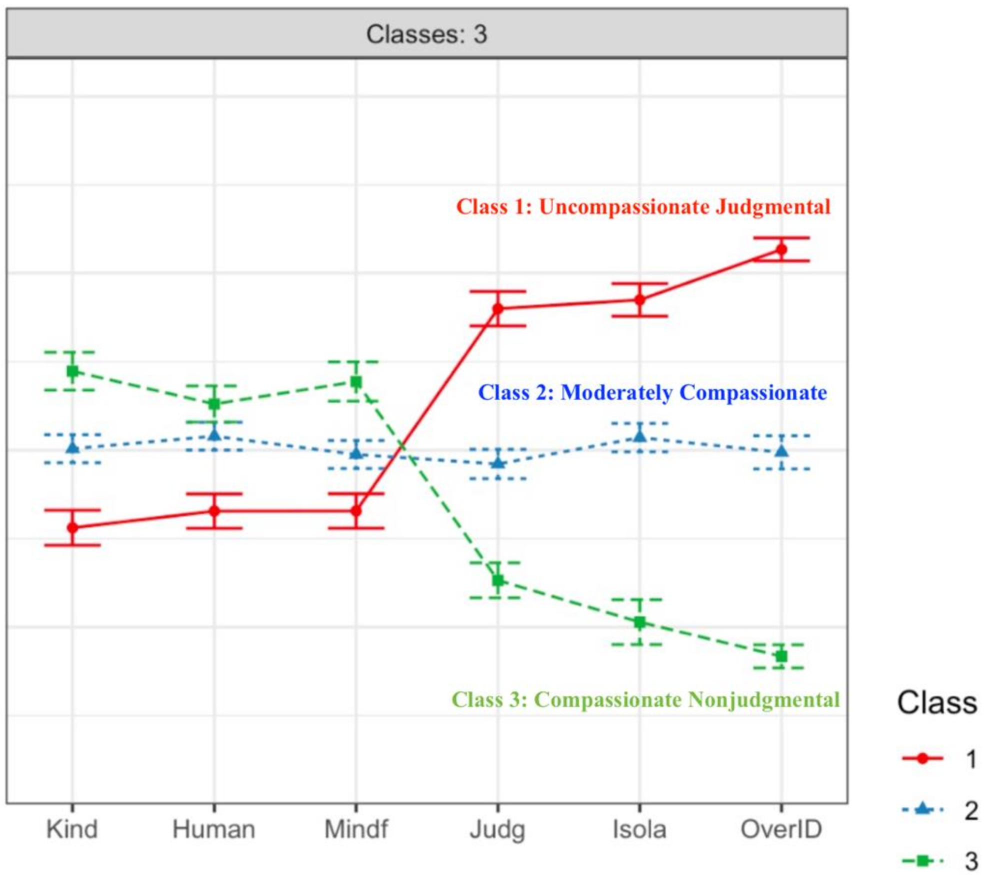
Table 6: LPA results and Fit Indices Using Model 1 and Model 3 Featuring Solutions with 1-5 Profiles.

Model	Classes	AIC	BIC	Entropy	Min. Prob	Smallest n	BLRT (p)
1	1	25541	25605	1	1	100%	-
(equal var,	2	23143	23244	.83	.94	44%	.01
covar zero)	3	22395	22533	.83	.88	17%	.01
	4	21871	22046	.78	.85	16%	.01
	5	21517	21729	.79	.79	3%	.01
3	1	21127	21271	1	1	100%	-
(equal var,	2	21024	21205	.65	.84	35%	.01
equal covar)	**<u>3</u>**	**<u>20906</u>**	**<u>21125</u>**	**<u>.76</u>**	**<u>.88</u>**	**<u>30%</u>**	**<u>.01</u>**
	4	20913	21168	.66	.74	12%	.29
	5	20854	21146	.70	.72	4%	.01

Note. AIC: Akaike Information Criterion; BIC: Bayesian information Criterion; BLRT: Bootstrapped likelihood ratio test. Min. Probability: the minimal probability value for assignment to one of the classes within this specific profile solution. Equal Var: equal variances; Covar Zero: covariances restricted to zero; Equal Covar: equal covariances. The boldened and underlined row indicates the selected profile model solution.

As mentioned, *tidyLPA* allows for four specific types of parameterization, all of which we ran in the present study. Model 1 is the most constraining and restrictive, because variances are held as equal across different profiles, and covariances between indicators are constrained to zero (i.e., equal variances, covariances fixed to 0). Model 2, in turn, offers additional flexibility, as variances are allowed to freely vary among individual profiles, yet covariances across indicators still remain fixed to zero (i.e., varying variances, covariance fixed to 0). Model 3 maintains variances among indicators equal across profiles, but allows covariances among the various indicators to be estimated and kept equal across various profile. Finally, Model 4, the most complex overall, allows both variances and covariances across profiles to be freely estimated without constraints among all emerging clusters. In assessing models, goodness-of-fit, and interpretability of profiles, we examined the Akaike Information Criterion (AIC; Bozdogan, 1987), the Bayesian Information Criterion (BIC; Schwarz, 1978), the bootstrapped likelihood ratio test (BLRT), and entropy as the main indices for model-selection. In addition, we used the alpha level .05 for decision-making on better model when likelihood ratio test results applied. Finally, we visually inspected profiles, considering distinguishability, meaningful differences in light of theory and the literature at large in order to select a final model. Figure 2 provides a visual depiction of our LPA results.

Figure 2: Line Graph of the Three Latent Profiles of Self-Compassion in the U.S.



Note. Line graph depicting the three profiles of self-compassion alongside standardized mean values (*z* scores) of the six subscales of self-compassion. Profile 1 (in red): Self-Berating: Uncompassionate-Judgmental; Profile 2 (in blue): Average Self-Responding; Profile 3 (in green): Self-Loving Compassionate-Nonjudgmental.

ANOVAs, Chi-Square Tests of Proportions and Distal Outcome Comparisons

To examine whether and to what extent distinct profiles of self-compassion differed on well-being, psychological symptoms, and spirituality, we also performed a series of analyses of variance (i.e., ANOVAs). Like prior person-centered studies in the extant literature (e.g., Phillips, 2021) we used participants' most likely profile of membership as our independent variable, and the various distal outcomes such as indices of distress (e.g., anxiety, depression, and negative emotion), well-being (e.g., life satisfaction, gratitude, subjective vitality, and positive emotion) and spirituality (e.g., religious meaning and personal spirituality) as our dependent variables. When multiple comparisons were performed, we used Tukey's HSD procedure in all pair-wise comparisons to control for and reduce the likelihood of Type I errors. Tables 7 and 8 feature our ANOVA results and comparisons among indices of self-compassion and outcome variables, respectively. To conclude, we ran a series of analyses assessing for gender differences, age differences, and differences among behavioral markers of meditation, mindfulness, and mind-body practices. We used cross-tabulation and Chi-Square tests of proportions to examine demographic characteristics distinct between profiles.

Table 7: Standardized Means and Standard Deviations of the SCS-SF Scales for each Profile.

	Profile 1 (n = 439, 30%) Self-Berating: Uncompassionate-Judgmental	Profile 2 (n = 591, 39.4%) Average Self-Responding	Profile 3 (n = 459, 30.6%) Self-Loving: Self-Compassionate-Nonjudgmental
Self-Kindness	$-.48_a$ (1.00)	$.02_b$ (.83)	$.45_c$ (.98)
Common Humanity	$-.38_a$ (1.05)	$.09_b$ (.83)	$.27_c$ (1.04)
Mindfulness	$-.38_a$ (1.06)	$-.03_b$ (.84)	$.41_c$ (.97)
Self-judgment	$.85_a$ (.72)	$-.07_b$ (.77)	$-.75_c$ (.84)
Isolation	$.91_a$ (.58)	$.09_b$ (.67)	-1.00_c (.71)
Over-Identification	1.20_a (.36)	$.01_b$ (.36)	-1.19_c (.35)

Note. Means sharing a subscript in a row indicate they were not significantly different from each other (i.e., p > .05) using Tukey's HSD correction for multiple comparisons.

Table 8: Standardized Mean Scores and Standard Deviations for Outcome Measures by Profile And F-Statistic of ANOVA.

	Profile 1: Self-Berating Uncompassionate Judgmental	Profile 2: Average Self-Responding	Profile 3: Self-Loving: Compassionate Nonjudgmental	*F*
Well-being	-	-	-	-
Satisfaction with Life	$-.59_a$ (.98)	$.05_b$ (.91)	$.50_c$ (.81)	159.88*
Subjective Vitality	$-.63_a$ (1.02)	$.05_b$ (.89)	$.55_c$ (.72)	197.22*
Gratitude	$-.36_a$ (1.03)	$-.07_b$ (.96)	$.44_c$ (.83)	80.54*
Perc. Social Support	$-.39_a$ (1.04)	$-.02_b$ (.97)	$.41_c$ (.80)	81.43*
Positive Emotion	$-.38_a$ (.94)	$.01_b$ (.97)	$.37_c$ (.95)	65.11*
Psychopathology	-	-	-	-
Depressive Symptoms	$.68_a$ (1.06)	$-.07_b$ (.88)	$-.58_c$ (.60)	236.02*
Anxiety Symptoms	$.71_a$ (1.11)	$-.10_b$ (.85)	$-.57_c$ (.55)	187.50*
Negative Emotion	$.46_a$ (1.18)	$-.02_b$ (.93)	$-.42_c$ (.63)	83.73*
Spirituality	-	-	-	-
Religious Meaning	$-.14_a$ (.94)	$-.03_a$ (.98)	$.18_c$ (1.05)	11.71*
Personal Spirituality	$-.18_a$ (.95)	$-.07_a$ (.98)	$.26_c$ (1.01)	23.82*

Note. Satisfaction with Life: SWLS; Subjective Vitality: Subjective Vitality Scale; Gratitude: Gratitude Questionnaire; Perc. Social Support: Multidimensional Perceived Social Support; Positive Emotion: PANAS-PA; Depression Symptoms: PHQ-9; Anxiety Symptoms: GAD-7; Negative Emotion: PANAS-NA; Religious Meaning: Religious Meaning Questionnaire; Personal Spirituality: Delaney Spirituality Scale (DSS). Means sharing a subscript in a row indicate they were not significantly different from each other (i.e., p ≥ .05).
*$p < 0.01$.

Results

In line with our research goals, first, we examined the relationships among the six aspects of self-compassion amongst themselves. Table 5 shows two-tailed Pearson correlations among the six dimensions of the self-compassion scale. Consistent with prior studies, our findings indicate significant and strong associations among the three positive aspects of self-compassion (with r ranging from .53 to .64) as well as among the three negative dimensions of self-compassion, (with r between .67 to .76). Interestingly, although negatively related to each other as theorized, the bipolar scales (e.g., self-kindness vs. self-judgment) involved weak-to-moderate negative associations (self-kindness vs. self-criticism $r = -.447$; common humanity vs. isolation $r = -.278$; mindfulness vs. over-identification, $r = -.369$) and were far from approaching a perfect negative correlation of -1, as the bipolar theory might hold. We comment further on this finding in our discussion of the results.

Second, we performed our latent profile analyses to identify, compare, and examine emerging profiles of self-compassion in an U.S. adult and age-diverse sample. Table 6 summarizes results from the latent profile analyses (LPA), including AIC, BIC, entropy levels, and bootstrapped likelihood ratio test *p*-values across Model 1 and Model 3. (Parameterizations and results using Model 2, which uses varying variances and fixes covariances at zero among profiles, and using Model 4, which uses varying variances and varying covariances among profiles, were not computable in *tidyLPA*, likely because the increased statistical complexity of these two options is associated with lower likelihood of convergence and fit.) Table 6 features solutions including 1 through 5 profiles across computable Model 1 and Model 3. Similarly to previous person-centered studies, ours included up to five profile solutions because no prior empirical studies found evidence for more than five profiles of self-compassion, and because as the number of profiles increases, subgroups shrink, and smaller subgroups might limit the validity and the generalizability of small groups. Using guidelines and general methodological consensus from the extant literature, we prioritized models with lower AIC and BIC, considered the bootstrapped likelihood ratio test as an informative statistic for better fit, and higher entropy as indicative of increased classification precision.

As Table 6 demonstrates, our analytical software successfully computed profiles using two specific parameterizations: Model 1 and Model 3. Model 1, which estimates and equalizes variances while fixing covariances at zero among indicators, presented with notably higher—and therefore not-as-well-fitting—AIC and BIC values. By contrast, Model 3, which estimates variances and covariances and equalizing them each across profiles, featured profiles with the lowest and, therefore, best-fitting AIC and BIC values. As a result, we selected the profile solution under Model 3, and performed all subsequent comparative analyses on the profiles emerging from Model 3. In addition, we found that our three-profile solution under Model 3 outperformed all other possible profile solutions derived using either Model 1 or Model 3 for multiple reasons. First, the three-profile solution under Model 3 featured the lowest—and therefore the best-fitting AIC and BIC—as well as the highest entropy values among other solutions under the same parameterization. Second, such three-profile solution under Model 3 was also noticeably less restrictive, allowing for covariances among indicators to be estimated, and maintained among profiles. Third, after examining the bootstrapped likelihood ratio test (BLRT), we found that the three profiles presented as better fitting than the two-profile solution ($p < .01$), and that the four-profile solution was not significantly better-fitting than the three-profile solution ($p = .29$). Figure 1 depicts our three-profile selected solution under Model 3, and including standardized mean scores of the six indices of self-compassion. Of note, results for the three-profile solution under Model 3 closely resemble results found by Phillips (2019), who also examined an adult population. In light of these findings, we selected the three-profile solution of Model 3 for all subsequent outcome comparisons and analyses.

Table 7 displays the means and standard deviations for the six subscales of the SCS-SF for each profile using the three-profile Model 3 solution. Higher scores suggest higher levels of self-compassion subscales. Overall, 30% of our sample (n = 439) was classified as best-fitting under Profile 1. Profile 1 featured low scores across all three positive aspects of self-compassion (with z scores for self-kindness, common humanity, and mindfulness ranging from -0.48 to -0.38) and elevated scores for the three uncompassionate aspects (with z scores for self-judgment, isolation, and over-identification ranging from 0.85 to 1.20). Therefore, we labeled Profile 1 as "*Self-Berating: Uncompassionate-Judgmental.*" Second, 39.4% (n = 591) of participants displayed average indices across all six aspects of compassionate and uncompassionate self-responding (z scores ranging between -.09 to .09.) Given such general averages, we labeled Profile 2 "*Average Self-Responding*." Third, Profile 3, included the remaining 30.6% (n = 459) of participants, and presented with a near mirror-opposite set of indicators compared to Profile 1. Specifically, for compassionate subscales, those in Profile 3 showed the highest levels of self-kindness (z = .45), common humanity (z = 0.27) and mindfulness (z = 0.41), as well as the lowest levels of self-judgment (z = -0.75), isolation (z = -1.00), and over-identification (z = -1.19). Put simply, participants in Profile 3 presented as the most compassionate and the least uncompassionate group of all three. Therefore, we labeled Profile 3 "*Self-Loving: Compassionate-Nonjudgmental.*"

All three profiles presented with significantly different levels across each of the six dimensions of self-compassion when compared to each other via ANOVAs and pair-wise comparisons with Tukey's HSD corrections. Figure 1 depicts these three emerging profiles of self-compassion. Of note, mirrored profiles showed remarkable differences in the magnitude of positive indices compared to negative indicators. For example, people in the *Self-Berating* group presented with much more pronounced self-judgment (z = 0.85), isolation (z = 0.91), and over-identification (z = 1.2) than reverse-scored positive items (with $-0.48 \leq z \leq -0.38$) . Likewise, the

Self-Loving group endorsed the positive markers of self-kindness (z = 0.45), common humanity (z = 0.27) and mindfulness (z = 0.41) with much smaller magnitudes than they endorsed negative dimensions of self-compassion (with $-1.19 \leq z \leq -0.75$). This pattern suggests that people tend to respond more prominently to negative items rather than positive irrespective of profile.

Our third and final goal was to examine whether the three profiles of self-compassion were differentially associated with indices of well-being, of psychopathology, and of religious meaning and spirituality. To examine these differences, we conducted a series of ANOVAs, with the likely profile of membership (i.e., 1, 2, or 3) as our independent variable, and each continuous outcome as our dependent variable. Results from the omnibus tests showed significant differences among the three profiles on all outcome, distal measures. Table 8 in turn summarizes the standardized mean scores, the standard deviations, and the F statistic comparing means across all three profiles of self-compassion.

The *Self-Berating, Uncompassionate-Judgmental* profile was associated with the lowest indices of well-being, including low satisfaction with life (z = -0.59), low subjective vitality (z = -0.63), gratitude (z = -0.36), low perceived social support (z = -0.39), and low positive emotion (z = -0.38), with the highest markers of distress (i.e., depression, anxiety symptoms, and negative affect; z scores ranging from 0.46 to 0.71), and with below-average indices of personal spirituality (z = -0.18) and religious meaning (z = -0.14). In turn, the *Average Self-Responding* presented with average levels of well-being (z scores ranged from -0.07 to 0.05), with average-ranging symptoms of distress (depression z = -0.07, anxiety z = -0.10, negative affect z = -0.02), and with average-ranging, but no statistically different levels from the *Self-Berating* profile on personal spirituality (z = -0.07) and religious meaning (z = -0.03). Of note, the *Self-Loving Compassionate-Nonjudgmental* profile demonstrated the highest levels of well-being (z scores ranged from 0.37 to 0.55), the lowest levels of depression (z = -0.58), anxiety (z = -0.57), and negative affect (z = -0.42), and with significantly higher levels of religious meaning (z = 0.18) and personal spirituality (z = 0.26) compared to all other profiles. In sum, people in the *Self-Berating (Uncompassionate-Judgmental)* profile presented as the emotionally and psychologically least well-adjusted group, while the *Self-Loving* (*Compassionate & Nonjudgmental)* profile presented as significantly more spiritual, less distressed, and with the highest indices of well-being in our sample compared to both other groups. The A*verage Self-Responding*, in turn, displayed average scores in well-being, spirituality, and psychopathology.

Finally, we performed a series of cross-tabulations and chi-square tests of proportions to examine the association between profiles of self-compassion with demographic and behavioral practices involving mindfulness and mind-body practices. Specifically, we conducted chi-square tests of independence for each of the variables, with all expected cell values greater than five. Our analyses found no significant gender differences among the three profiles of self-compassion χ^2 (2) = 2.006, p = .367; all profiles presented with similar proportions of male- and female-identifying participants. On the other hand, we found significant age differences between groups (F = 17.57, p < .001): the *Self-Loving* profile was the oldest profile (M = 37.32, SD = 12.01), the *Self-Berating* group was the youngest (M = 33.18, SD = 10.26), and the *Average Self-Responding* was of intermediate age between to the other profiles (M = 34.44, SD = 10.25). For meditation practice, we found a significant association between profile membership and mindfulness meditation practice χ^2(2) = 11.322, p = .003, although the association was small (Cramer's V = .087). Participants in the *Self-Loving: Compassionate-Nonjudgmental* profile were more likely to report having a meditation practice than not having one (adjusted standardized residual = 3.0). By contrast, participants in the *Self-Berating (Uncompassionate-*

Judgmental) group were less likely to report having a meditation practice (adjusted standardized residual = -2.4) than having one. Finally, we also found a significant association between self-compassion profile membership and participants' endorsement of engaging in mind-body practices (e.g., yoga, tai-chi, Qigong, etc.), $\chi^2(2) = 6.104$, $p = .047$, although the association was also small (Cramer's V = .064.) People in the *Self-Berating* profile were significantly less likely to endorse having a meditation practice (adjusted standardized residual = -2.3), whereas people in the *Self-Loving* profile were more likely to report engaging in a mind-body practice (adjusted standardized residual = 1.8). As expected, participants in the *Self-Loving* profile were more likely to endorse having either a contemplative meditation or mind-body practice than members of the *Average Self-Responding* or the *Self-Berating* profiles.

General Discussion

The present study identified three profiles of self-compassion among age-diverse adults in the United States. Using data from 1,499 U.S. adults who completed the self-compassion scale including its three positive dimensions (self-kindness, common humanity and mindfulness) and negative dimensions (self-judgment, isolation, and over-identification), we compared these three typologies of self-compassion across measures of well-being, spirituality and contemplative, and psychopathology. We found a self-compassionate, nonjudgmental group, which we labeled *Self-Loving (Compassionate-Nonjudgmental*), a second profile with average scores across all six subscales of self-compassion, which we called *Average Self-Responding*, and a third, uncompassionate and self-judgmental group, which we called *Self-Berating (Uncompassionate-Judgmental)*. The *Self-Loving* group showed the highest levels of well-being, lowest levels of psychopathology, and the highest levels of spirituality, religious meaning, and greater likelihood of endorsing lifetime experiences with mindfulness or mind-body contemplative meditations or practices. By contrast, the *Self-Berating* profile presented as the most depressed, the most anxious, and with the lowest levels of well-being and lowest likelihood of having a mind-body or mindfulness contemplative practice; the *Self-Berating* group also presented with significantly lower levels of spirituality compared to the *Self-Loving* profile, but with levels of spirituality not significantly different from those of the *Average Self-Responding*. In turn, the *Average Self-Responding* showed intermediate levels of depression, anxiety and overall well-being and its levels of spirituality were not statistically different from those of the *Self-Berating* profile, though such spiritual levels lower than those of the *Self-Loving*. In other words, only the *Self-Loving* profile indicated significantly higher levels of spirituality compared to the other two profiles of self-compassion. No sex or gender differences were found among profiles. However, the *Self-Loving* profile emerged as the oldest profile in the sample. Profiles also demonstrated differential degrees of self-reported endorsement of mindfulness, mind-body, and contemplative practices: the *Self-Loving* group self-reported more lifetime practice of both mind-body contemplative practices and mindfulness practices than the other two profiles.

The most novel and striking finding of our investigation was that differences between these naturalistic profiles across the positive subscales of self-compassion were much smaller than the differences among profiles across negative indices self-compassion. That is, self-judgment, isolation, and over-identification with one's suffering distinguished these lived profiles of self-compassion to a greater extent than did differences among positive self-compassion indices (i.e., self-kindness, mindfulness, and common humanity). These differential magnitudes between the positive and negative aspects of the self-compassion scale (SCS; Neff, 2003b) have important implications to the debate on the best measurement approach for self-compassion, which we explore below.

Overall, our three self-compassion profiles and their differential associations with well-being and psychopathology replicate findings from some previous studies (e.g., Phillips, 2019) and contrast others (Ullrich-French & Cox, 2020; L. Wu et al., 2021). Like us, Phillips (2019) also found three profiles of self-compassion among Australian adults and Australian college students. Their profiles included a highly self-compassionate, a moderately self-compassionate, and a uncompassionate self-responding groups. Phillips (2019) also found that the highly self-compassionate profile demonstrated higher well-being, lower anxiety, depression and stress, and more adaptive emotion regulation strategies than other groups. Their moderately self-compassionate group, in turn, demonstrated higher well-being and more adaptive emotion regulation skills than those in the uncompassionate group. However, our study was unique in exploring the association between profile membership and spirituality, in demonstrating these relationships in the U.S. with an age-diverse sample, and in showing that the most self-compassionate profile endorsed higher levels of spirituality and greater likelihood of having a mind-body contemplative practices. On the other hand, Ulrich-French & Cox (2020), found not three, but sets with four and five profiles among undergraduate samples. Additional profiles found included an "indifferent profile" with 3% of undergraduate students, a "high-responding," with 5% of a college sample, and a "below-average," yet with 5% of another undergraduate sample. Surprisingly, Ulrich-French & Cox (2020) found that the *highly compassionate* group did not differ from the *indifferent* group in depression and anxiety symptoms. We hypothesize this counterintuitive result emerged because, with a mere 3% of an undergraduate sample, statistical comparisons among such small subgroup are more error-prone, less reliable and subject to outlier effects. Plus, with such small subgroups exclusive to college samples, their findings bear important issues of generalizability. Our results also contrasted those of Wu and colleagues (2021) who studied Chinese college students and who found evidence for five profiles of self-compassion: a high self-coldness/low self-compassion (16%), a low self-coldness/low-self-compassion (17%), low self-coldness/high self-compassion (18%), an average self-kindness/average self-coldness (39%), and high self-compassion/high self-coldness (10%). Like us, Wu and colleagues (2021) also found that those with elevated self-compassion and low self-coldness showed highest well-being and lowest psychopathology, while those with elevated self-coldness, regardless of how high their associated self-compassion indices, showed the "worst outcomes" (p. 2510). Differently from those studying Western college samples, Wu and colleagues (2021) found five sizable and robust profiles with variations in self-coldness and self-compassion among Chinese college students. Yet, the prominent presence of dialectical profiles in China, with co-occurring self-coldness and self-warmth is consistent with prior research suggesting greater dialectical thinking among East Asian people (Zhao et al., 2021). Prior research also suggests the prevalence in Asia of dialectical thinking may be due to Taoist philosophy and cultural practices indigenous to many East Asian cultures (Peng et al., 2006), to the required coursework on Marxist dialectical thinking in China (Zhang et al., 2015), and to a long-term orientation to life stemming Confucian Dynamism (Zhao et al., 2021). Future research may continue to examine cross-cultural differences in self-compassion across Eastern and Western Samples and investigate the mechanisms thereof.

Overall, the evidence thus far suggests that the most self-compassionate mindsets are psychologically healthier, present with higher well-being, are slightly older, and endorse high levels of spirituality than more uncompassionate and self-berating mindsets. In addition. our study emphasized that differences among the underlying indices of compassionate and uncompassionate mindsets among profiles were not symmetrical: one unit above average in self-kindness for the self-compassionate profile did not correspond with one standard unite below average in self-judgment for the same group as a bipolar continuum akin to temperature might suggest (Neff, 2022). Rather, the magnitudes of positive self-compassion and of negative self-compassion differed substantially among and within profiles, and were especially striking between the *Self-Loving* and the *Self-Berating* groups: self-judgment, overidentification with suffering, and isolation presented with greater magnitudes than positive aspects of self-compassion. This suggests that people may identify more with self-criticism, isolation, and over-identification than with self-kindness, common humanity, mindfulness. Of psychometric relevance, our correlational analyses examining positive and negative aspects of self-compassion also showed that the theorized opposites did not fit neatly into a simple bipolar continuum, as Neff has maintained (2022). Instead, positive and negative subscales of self-compassion were only moderately negatively associated with each other, bearing small-to-medium magnitudes instead of a large negative values, despite the fact correlation values were almost identical to those established in the original scale development study for the short version of the SCS (Raes et al., 2011). If the positive and negative dimensions of self-compassion were truly on a bipolar continuum, as theorized (Neff 2003a, 2003b) and reiterated by Neff (2022), correlations among would have approximated a perfect inverse association, which we did not find. On the other hand, our profiles of self-compassion presented another picture, with clear and inverse-looking *Self-Loving* and *Self-Berating* groups, each with mirrored shapes across positive and negative levels of self-compassion. This inverse pattern across profiles and across positive and negative indicators of self-compassion might be interpreted as a challenge the recommendation by Muris et al. (2016) and by Muris and Petrocchi (2017) to dissociate positive and negative elements of self-compassion. However, our findings highlighted how the *Self-Loving* and *Self-Berating* profiles presented with differential magnitudes among positive and negative self-compassion—there is an inverse, mirrored relation between compassionate and uncompassionate dimensions, but one that is not equal in its ends, since negative indices were more pronounced than positive ones. Our latent profile analyses added nuance to this psychometric debate and underscored the value of person-centered approaches in scale development, validation, and research.

On spirituality, religious meaning, and contemplative practices, the most self-compassionate group reported the strongest identification with and greater endorsement of spiritual awareness and contemplative practices, and was the only group to emerge as significantly different among these traits from others. Prior literature corroborates this finding and suggests that spirituality may be especially protective to people who rate spirituality specifically as "highly important" versus simply "important" or "not important" in their lives (McClintock et al., 2016; Miller et al., 2014b). Perhaps people whose lives center around existential questions and spiritual reflection and who develop a spiritual view of human existence as non-contingent on outwardness, as holding inherent dignity, also present with the highest levels of self-compassion**.** Such positive association between lived experiences with spirituality and improved mental health outcomes might not be linear, but instead follow skewed distributions and be of a higher magnitude among those who identify as the most spiritual. Future longitudinal research assessing spiritual and self-compassion development may help address causal relations between spirituality and self-compassion. Prior empirical research also highlights the many benefits of contemplative practice (Danucalov et al., 2017; Liss et al., 2023; Patel et al., 2018). Key among contemplative practices, mindfulness programs have stood out for their many health and psychological benefits, including improvements to quality of life and reduction of chronic pain (Morone et al., 2008), lower depression relapse rates (Kuyken et al., 2016), substantial reductions in anxiety and distress (Hofmann et al., 2010), improvements in eating habits and regulation (Daubenmier et al., 2011), more adaptive emotion and attention regulation practices (Jha et al., 2010; Ortner et al., 2007) and improvements in social integration and connectedness (Hutcherson et al., 2008). Likewise, self-compassion practices have a demonstrable host of physical, emotional, interpersonal, and psychological benefits, including in improving rumination, disordered eating, depression, anxiety, and self-criticism, and general stress (Ferrari et al., 2019). Our findings support these trends, given how the *Self-Loving* profile was associated with greater lifetime practice of mindfulness meditations and mind-body contemplative practices, while those in the *Self-Berating* profile endorsed less contemplative and mind-body practices in general.

Clinical implications

Our findings are consistent with prior meta-analyses on self-compassion and with a growing body of evidence suggesting the positive physical and psychological impact of self-compassion interventions and of a self-compassionate mindset (MacBeth & Gumley, 2012; Zessin et al., 2015). Of greater significance, even the *Self-Loving* mindset still tended to show more variation among uncompassionate dimensions (self-judgment, isolation, and overidentification with suffering) than across the positive dimensions (i.e., self-kindness, mindfulness, and common humanity). This point holds meaningful clinical ramifications: the pattern whereby people identify more strongly with self-critical and self-berating approaches is consistent with a well-known phenomenon in the social and clinical psychology literature: the negativity bias (Vaish et al., 2008). The negativity bias is defined as our tendency to attend to and to focus on negative information cues and negative emotional experiences more prominently than on positive cues and positive emotions (Carlisi & Robinson, 2018; Gollan et al., 2016;

Watters & Williams, 2011). Abundant evidence indicates people tend to weigh unpleasant experiences and even negative adjectives more heavily than positive aspects or positive adjectives of assumed equal intensity (Kahneman & Tversky, 1984). Evidence also indicates this negativity bias emerges early in cognitive and emotional development (Vaish et al., 2008). Despite the ubiquity of the negativity bias in light its assumed evolutionary benefits, its impact on psychopathology has also been notable, since negative biases are foundational for the development and course of anxiety and mood disorders (Ao et al., 2020; Carlisi & Robinson, 2018; Gollan et al., 2016; Watters & Williams, 2011). Among depressed people, negative rumination and brooding have been identified as important mechanisms negatively biasing attentional and information processes (Raes et al., 2006) and consolidating pathways for psychopathology. On an optimistic note, mindfulness and self-compassion practices have been shown to reduce the magnitude and influence of the negative bias in attitude formation (Kiken & Shook, 2011). Likewise, a brief self-compassion exercise has also been shown to help people disengage from feelings of inadequacy, shame, and other negative emotions and to reduce feelings of shame and rumination typically associated with the onset of depression symptoms (Johnson & O'Brien, 2013; Yip & Tong, 2021). Clinical interventions and self-compassion programs, therefore, may exert powerful effects in helping offset our human bias toward rumination, brooding, self-criticism and negative emotions in general, and in consolidating positive, more balanced self-perceptions and emotions. In light of the prominence of negative aspects of self-compassion, therapeutic interventions may choose to prioritize the continuous development of self-awareness on people's automatic tendency to focus on negative emotions and unpleasant experiences through rumination and self-critical thinking. Bringing awareness to one's tendency to be self-critical and judgmental first, and then following up on targeted self-compassionate practices, may help counteract a powerful and widespread bias we hold. Future dismantling studies may elucidate this point by exploring the differential benefits associated with building awareness of self-criticism first and then introducing a self-compassion or from teaching a self-compassionate stance first and then examining whether self-criticism lowers. Overall, our study highlighted the salience of people's habitual tendency to perceive their experiences through a negative, self-critical lens, and the potential that self-compassion and mindfulness practices hold for balancing the *positive-negative* spectrum of experiences away from an overdetermined negativity bias toward a more centered emotion regulation approach.

Limitations and Recommendations for Future Research

Like any other, our study has several limitations. First, we relied on cross-sectional data for our analyses, which limits our ability to make causal inferences involving whether membership in a specific self-compassion profile is cause or the result of differential levels of well-being, psychopathology, and spirituality. Rather, we may only infer that profiles of self-compassion are differentially *associated* with well-being, psychopathology, spirituality, age, and contemplative practices. To that end, future research might employ longitudinal methods such as latent transition analysis in order to investigate unaddressed questions on how self-compassion profiles emerge, develop, change over time, as well as how stable they are (Lanza et al., 2003). Secondly, our study relies on self-report data, and self-report data are subject to numerous reporting biases, such as the halo effect, patterns of underreporting and of inattention (Chan, 2009; van de Mortel, 2020). Although no definite, reliable, and validated behavioral methods have emerged for self-compassion, innovative approaches that employed multi-trait, multi-method frameworks and which cross-validated behavioral and self-report indicators of self-compassion would greatly enrich the field. Studies that choose to incorporate self-report and emerging behavioral data would be essential in converging people's self-report experiences with the observable changes in parasympathetic and sympathetic activities, or brain-based convergence signaling of self-compassionate responses. With the increase in accessibility of mood- and health-tracking devices for sympathetic and parasympathetic vagal tone and response, researchers may also incorporate induction and state-level assessments of self-compassion when conducting person-centered studies (Breines & Chen, 2013; Neff et al., 2021). In addition, with the recent development of state-based measures—as opposed to trait-based ones such as the Self-Compassion Scale (SCS-State; Neff et al., 2021)—future research might also derive latent profiles of self-compassion based on state-based measures of self-compassion. Third, our study examined a US-based adult sample only, which limits our scope of inferences and conclusions to the United States. As discussed, prior research has investigated profiles of self-compassion among Australian college students and adults (Phillips, 2021), Chinese undergraduates and cancer patients (Wei et al., 2023; L. Wu et al., 2021), and have demonstrated some convergence and some contrasts with our results. Future research that expands the populations examined and that includes distinct cultural, ethnic, racial, and national backgrounds regarding self-compassion traits and profiles is warranted. Finally, future research might also explore the differential impacts of self-compassion versus those of self-coldness on mental health and psychosocial outcomes. Körner et al. (2015), for example, reported that *self-coldness* "consistently differed between subsamples of individuals without any depressive symptoms, with any depressive syndromes, and with major depressive disorder," while "[contributions] of positive SCS subscales of self-kindness, common humanity, and mindfulness to the variance in depressive symptomatology was almost negligible" (p.1). Because in our study, *self-coldness* presented more noticeably than positive *self-compassion* scores, future studies dismantling self-compassion into subparts and the specific impact of these negative traits on the development, trajectories, and maintenance of self-compassion would also be important.

Conclusions

In conclusion, our study provides evidence for three profiles of self-compassion based on the self-compassion scale, short-form (Raes et al., 2011): a *Self-Loving*, a *Self-Berating*, and an *Average Self-Responding* group. These distinct profiles of self-compassion were differentially associated with psychopathology, well-being, contemplative practice, age, spirituality. The *Self-Loving* emerged as the most well-adjusted and spiritual, while the *Average Self-Responding* group presented with intermediate levels of well-being and of psychological functioning, and the *self-berating* group endorsed the highest levels of psychopathology symptoms and the lowest indices of well-being. Treatment studies and self-compassion interventions might consider addressing the elevations in identification and in magnitude of *uncompassionate* aspects among participants compared to positive, compassionate dimensions, and the fact that those who reported engaging in mindfulness meditation, prayer and a spiritual or contemplative state of perception or way of life tended to endorse higher levels of self-compassion overall. In part, our results highlight people's bias toward negative self-related experiences such as self-judgment and self-criticism. Our study also emphasizes how positive and negative aspects of the self-compassion scale are no perfect mirrors of each other, and how, despite their apparent low magnitude of the correlations among theoretical opposites, in aggregate, profiles of self-compassion that indicated inverted relations among self-warmth and self-coldness clearly emerged, underscoring the value of incorporating both traditional variable-centered approaches and person-centered frameworks to validate and evaluate psychometric scales. Future clinical studies addressing self-compassion training, mindfulness and contemplative practice may benefit from recognizing the pervasive and determinant influence of uncompassionate, self-directed thoughts in relation to self-compassion profile membership, and from focusing on diminishing their toll via additional psychoeducation through a cognitive restructuring framework.

Chapter 2C: Love Profiles in the United States and Their Differential Associations with Well-Being, Psychopathology, and Spirituality

Abstract

Previous research on love has focused on describing love types and the prototypical qualities of love. Few studies have examined profiles of love in the population at large. Using data from 1,499 US adults who completed the Sorokin Multidimensional Inventory of Love Experience (SMILE), we conducted a series of latent profile analyses to examine emerging profiles of love. In sequence, we assessed the personal, interpersonal and transpersonal correlates of love profiles. Results indicated four profiles of love in the United States: a *High-Love,* a *High-Average Love*, a *Low-Average Love,* and a *Low-Love* profiles. In addition, profiles of love were differentially associated with well-being, spirituality, and psychopathology. The *High-Love* group presented as the most well-adjusted; the *High-Average*, though with similar levels of anxiety, depression, and negative emotion compared to the *Low-Average* and *Low-Love* profiles, emerged as the second highest in spirituality; the *Average-Low* and the *Low-Love* profiles presented with the lowest levels of well-being, of spirituality, with the highest levels of depression and anxiety, and with similar levels compared to each other. Of all love dimensions examined, *religious love* was the clearest distinguisher and the most salient differentiator of love profiles, suggesting that how people relate to or feel embraced by a higher power, by an ultimate reality or their sense of the divine, may reflect feelings of love across other areas as well as well-being, spirituality, and mental health.

Love has long been a central yet elusive construct in human experience. Hailed as a key inspiration to poets, writers, philosophers, and artists for millennia, love recently began to allure social scientists. To date, social scientists have developed several definitions and scales purporting to measure subjective experiences of love. Pioneer among love scholars, Rubin (1970) defined love as "an interpersonal attitude held by a person toward a particular other person, involving predispositions to think, feel, and behave in certain ways toward that other person" (p. 265). Rubin (1970) went on to develop the Love Attitudes Scale, which distinguished "love" from "liking,", and which underscored love as necessitating "an affiliative and dependent need," "a predisposition to help" and "an orientation of exclusiveness and absorption" (p. 266). As informative as Rubin's (1970) differentiation of "liking" from "loving" was, Berscheid and Walster (1974) expanded the scope to include two types: "passionate love*,"* marked by physiological arousal and proper labeling and, "companionate love*,"* involving a combination of affection and attachment. Sternberg (1986) later consolidated a threefold theory of love as composed of *attachment*, *intimacy*, *commitment.* Examining prototypical conceptions of love, Shaver and colleagues (1987) also found three primary prototypes of love: *affection*, captured by a sense of companionship imbued with fondness, caring, and tenderness, *lust*, marked by arousal, desire, lust, and infatuation, and *longing*. Similarly, Fehr (1988) extended the prototype approach to the study of love and commitment, and found that, in the layperson's view, love is represented by concepts such as *trust*, *caring, honesty*, and *friendship*. In turn, Hendrick and Hendrick (1986) built on Lee's typologies of love (1977) and described six primary styles of love based on Greek terms: *eros* for passionate, *storg*e for friendly, *pragma* for practical, *mania* for intense and obsessive, *agape* for unconditional, and *ludus* for playful love. With these types in mind, Hendrick and Hendrick (1986) developed a questionnaire examining a couple's main profile of love, followed by a shorter version of the scale (Hendrick et al., 1998). In parallel, Sternberg and Grajek (1984) performed a factor analysis of various approaches and descriptions of love in the popular literature and psyche. Consistent with earlier findings by Rubin (1970), Sternberg and Grajek (1984) postulated a "general factor of love" (p. 327), found love to be "primarily a unifactorial entity with possible subfactors" (p. 327) and that the "structural composition of love is surprisingly similar across different close relationships" (p. 327). According to Sternberg and Grajek (1984), the main factor of love involves "interpersonal communication, sharing, and support" and its subcomponents include "a) deep understanding of the other, b) sharing of ideas and information, c) sharing of deeply personal ideas and feelings, d) receipt and provision of emotional support to the other, (e) personal growth through the relationship and helping of the other in his or her personal growth, (f) giving help to the other, (g) making the other feel needed and needing the other, and (h) giving and receiving of affection in the relationship" (p. 327). More recently, Berscheid (2010) examined the evolving empirical literature on love, and described four core varieties: *passionate*, *compassionate*, *companionate*, and *attachment*. Following on Berscheid's systematic and meta-theoretical approach, Graham (2011) conducted a meta-analysis and factor analyses to extract the core aspects of love from the empirical literature. Graham (2011) initially found three higher-order factors: *love*, *romantic obsession*, and *pragmatic friendship*, but concluded only *love* (capturing a general factor "*l*") matched theoretical notions of love *per se* held in romantic relationships. Graham (2011) concluded that "a single higher-order factor, and not dichotomous, as in *passionate* vs. *companionate*, or *loving* vs. *liking*, or trichotomous as in *passion*, *intimacy*, and *commitment* factors best describe the relationship between most measures of love" (p. 760). Earlier on, Aron and Westbay (1996) had extended the prototype approach to love and found three primary latent dimensions of prototypical love: *intimacy*, which they rated as the most important, *commitment*, of intermediate importance, and *passion*, rated as the least important. Finally, Sternberg (1996) reviewed the wide range of love experiences in clinical psychology and found that love might be interpreted as a narrative, as a story lovers tell themselves about their relationship and how they ought to relate to each other. Commonly, lovers frame "love [a]s a journey," "[a]s like gardening, since it must be nurtured and tended to," and "love [a]s a democratic government, where partners share equal power;" among the least common narratives, Sternberg (1996) noted some people's conception of "love as an autocracy."

Despite the abundance and prominence of these scales, theories, and definitions, few social scientists have explored the spiritual, mystical, and transpersonal dimensions of love beyond the attachment-based, companionship-oriented, and passion-focused aspects highlighted above. How might social scientists and clinical psychologists conceptualize love for life, love for God, and philanthropy? Pioneering among the early theorists and scholars on love, Sorokin (1954, 2015) addressed the spiritual, religious, and philosophical dimensions of love earlier than most empirical scholars. In Sorokin's framework, love is multidimensional. To develop his theory of love, Sorokin closely examined the biographies of people with a highly developed moral compass and found love to be central to their life orientation and purpose. Sorokin further extended this notion to all people and deemed love as a centralizing human construct. In brief, Sorokin subdivided love into six primary dimensions, which included *biological*, *social*, *psychological*, *religious*, *ontological*, and *ethical* love. Biological love referred to love for the pursuit of pleasure; social love addressed love in interpersonal dimensions; psychological love implied feeling loved as one is by others; religious love referred to the experience of feeling embraced and accepted by God or a higher power; ontological love involved feeling that love composes the fabric of life and the universe; ethical love emphasized the belief that love is the morally appropriate way to be, to act, and to live. Building on Sorokin's framework, Levin (2001) examined the relationship between love and *religious* love, in particular, with health and well-being. Levin (2001) found that *religious love* was associated with better health outcomes, such as better self-rated health outcomes, subjective vitality, and energy. Levin and Kaplan (2010) then went on to develop a multidimensional inventory of love named: Sorokin Multidimensional Inventory of Love Experience (SMILE). The SMILE provides a reliable instrument of a wide range of love dimensions and love experiences, and enriches the literature by giving priority to these greater manifestations of love beyond the mere romantic or interpersonal dimensions.

The present study closely examines these distinct dimensions of love and builds on prior literature that examined the relationship between transpersonal dimensions of love with indices of health and well-being. Prior studies indicated that subjective experiences of love are key for health and well-being (Ai & Hall, 2011; Esch & Stefano, 2005; Levin, 2001; Traupmann & Hatfield, 1981). Although research on multiple dimensions of love remains novel and of a slow rise in the clinical and empirical psychological literature, more remains to be discovered on the correlates and elements of various types of love for mental and emotional health in large samples. Building on the growing person-centered literature and using latent profile analyses, our study examines the differential associations of love with well-being and mental health indices. To our knowledge, ours is the first study to assess *love experiences,* Sorokin's Multidimensional Inventory of Love Experience (SMILE; Levin & Kaplan, 2010), profiles of love, and their differential associations with well-being, psychopathology, and spirituality.

Aims of the Present Study

First, through a series of person-centered analyses, our research investigated how Sorokin's (1954, 2015) six dimensions of love interrelate. Second, we explored how particular groups may be alike and differ in their endorsement of and identification with these six dimensions of love. Might we find that some people present with higher levels of *social*, *psychological* and *biological* love, but lower with lower levels in *religious* and *ethical* love, for example? With an abundance of potential combinations and permutations of love groups when trichotomizing love dimensions into merely "high," "medium," and "low," our research hopes to elucidate the emerging types, mindsets, or profiles of love in the U.S. at large. Third, we aimed to examine love profiles' differential associations with key markers of well-being, psychopathology, and spirituality. To do so, we assessed the intercorrelations among the six Sorokin's love dimensions (Levin & Kaplan, 2010; Sorokin, 1954), investigating the magnitude, directions, and patterns among the correlation indices involving biological, psychological, social, religious, ethical, and ontological love. Then, we aimed to explore potential emerging profiles of love using Sorokin's six dimensions thereof as profile indicators using latent profile analyses (Spurk et al., 2020). Finally, and assuming meaningful and distinct profiles of love emerged, we aimed to examine their differential associations with well-being, spirituality, and psychopathology. Given the recent surge of profile studies demonstrating population heterogeneity across multidimensional instruments (e.g., De Souza Marcovski & Miller, 2022; Phillips, 2021), we hypothesized meaningful and distinct groups, mindsets, or profiles of love. We also hypothesized that profiles displaying greater indices of love overall might present with stronger positive associations with markers of well-being, flourishing, life satisfaction, and spirituality, and less psychopathology, whereas profiles with the lowest indices of love would indicate opposite trends.

Method

Study Procedure

In total, 1499 US-based adults between ages 18 and 80 participated in this study. Participants were recruited via Mechanical Turk (MTurk). Prior to joining our study, participants were informed that they would be asked to complete an online survey that included questions focused on understanding participants' quality of life, well-being, spirituality, and distress and stress. Timed-entries for onset and completion were also evaluated as participants completed their response. Data quality controls, such as attention checks, US-based IP address verification, and time stamps were embedded to assure integrity of the data. The present study followed the ethical principles and guidelines outlined in the Belmont Report and according to the Helsinki conventions for ethical standards in human subject research, and it was approved by the Institutional Review Board (IRB) of Teachers College, Columbia University.

Measures

Love was measured via the Sorokin Multidimensional Inventory of Love Experience (SMILE; Levin & Kaplan, 2010). The SMILE is a 24-item, Likert scale assessing six distinct dimensions of love as conceptualized by Sorokin (1954, 2015), including biological, social, psychological, ethical, religious, and ontological love. *Biological love* refers to love for pleasure-seeking and rewarding experiences; *social love* assesses unconditional love for a friend and for other people in general; *psychological love* measures the subjective experience of feeling loved and of having felt loved; *ethical love* underscores the extent to which people believe that behaviors practiced out of love represent the moral, virtuous, and ethically upright way to act; *religious love* assesses feeling loved, embraced, or accepted by a Higher Power; *ontological love* examines the metaphysical belief that love underscores the fabric of life, of human relations, and of the universe as a whole. Respondents were asked to rate their agreement with four statements per dimension on a Likert scale from 1 through 5. Prior validation and reliability analyses have found the SMILE to demonstrate clear factor loadings across the six theoretical factors, and significant intercorrelations among all subscales, except for biological love—the only index unrelated with other scales (Levin & Kaplan, 2010). *Cronbach's* α: religious love α = .98; ethical love α = .89; ontological love α = .84; biological love = .79; psychological love α = .76; social love α = .76.

Psychopathology and Negative Affect.

Anxiety symptoms were measured through the Generalized Anxiety Disorder -7 (GAD-7; Spitzer et al., 2006). The GAD-7 is a seven-item instrument that has shown excellent internal consistency and substantial evidence of diagnostic and criterion validity. The GAD-7 is sensitive to varying levels of anxiety, and has been used in and validated with various samples and populations around the world (Spitzer et al., 2006). *Cronbach's* α = .93.

Depressive symptoms were measured through the widely-used Patient Health Questionnaire-9 (PHQ-9; Kroenke et al., 2001). We used this brief scale of depression because the PHQ-9 has shown excellent internal consistency and good evidence of diagnostic and criterion validity among various samples and populations in the U.S. and around the world (Arroll et al., 2010b; Costantini et al., 2021; Kroenke et al., 2001a; Lotrakul et al., 2008b), and because the PHQ-9 is easy to administer. The PHQ-9 offers a brief and effective measurement of depression. *Cronbach's* α = .91.

Negative Affect was assessed through scores in the negative items from the Positive and Negative Affect Schedule (PANAS; Watson et al., 1988). Participants were asked to rate using a 5-item rating scale the degree which they felt a certain distress emotion, where “1” meant “very slightly or not at all" and "5" meant "extremely." Emotions assessed included fearfulness, upset, irritability, distress. Higher scores indicated more pronounced negative affect. *Cronbach's* α = .92.

Measures of Well-Being and Positive Psychology

Gratitude was measured via the Gratitude Questionnaire (Emmons et al., 2003; McCullough et al., 2002). The Gratitude Questionnaire is brief, unidimensional scale, based on a seven-point Likert scale assessing one's gratefulness. Sample items include: "I have so much in life to be thankful for" and "I am grateful to a wide variety of people." Gratitude has emerged as central concept in positive psychology, and appears closely linked with general well-being (Emmons et al., 2003). For example, higher ratings of gratitude have been associated with more frequent positive emotions, higher optimism, life satisfaction, and lower levels of general stress and anxiety (Emmons et al., 2003). *Cronbach's* α = .82.

Satisfaction with Life was assessed through the Satisfaction with Life Scale (SWLS; Diener et al., 1985). The SWLS scale is a widely-used, validated, reliable, and brief five-item instrument measuring one's levels of life satisfaction. Participants were asked to rate items such as "I am satisfied with my life" indicating their degree of agreement with each statement on a 7-point Likert scale. Higher scores suggest greater levels of satisfaction in life. *Cronbach's* α = .94.

Subjective Vitality was measured via the Subjective Vitality Scale (SVS; Ryan & Frederick, 1997). The SVS is brief, seven-item instrument assessing participants' overall sense of aliveness and energy. Sample items include "I feel alive and vital," "I have energy and spirit," "I look forward to each day," "I feel energized." The scale uses a 7-point Likert scale, in which higher scores suggest higher sense of autonomy and self-actualization. Subjective vitality is purported to examine both somatic and psychological concomitants of energy. *Cronbach's* α = .92.

Perceived Social Support was measured through the Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988). This scale consists of 12 items and examines subjective experiences of support along three distinct contexts: family, friends, and significant other (Zimet et al., 1988). Perceived Social Support has been extensively used validated, and empirical research suggests that social support serves as an important buffer against negative experiences and stress (Zimet et al., 1990a). *Cronbach's* α = .95.

Positive Affect was measured through the positive items within the Positive and Negative Affect Schedule (PANAS; Watson et al., 1988). The positive items were measured via a 5-point Likert scale examining participants' present experiences with positive emotions such as joyfulness, cheerfulness, contentment, among others. Higher scores suggest more positive present-moment emotional states. *Cronbach's* α = .91.

Measures of Spirituality and Religiosity

Spirituality was measured through the Delaney Spirituality Scale (DSL; Delaney, 2005). The DSL is a 23-item, instrument examining four dimensions of spirituality: *ecological awareness* (i.e., "I believe that nature should be respected"), *self-discovery* (i.e., "My life is a process of becoming"), *relational spirituality* (i.e., "I respect the diversity of people"), and *sacred connection* (i.e., "my faith in a higher power/universal intelligence helps me cope with the challenges of my life"). Using on a six-point Likert-scale, participants indicated the degree to which they agreed or disagreed with each statement. We computed an overall sum score inclusive of all dimensions of spirituality to assess a participants' overall sense of spirituality. *Cronbach's* α = .94.

Religious/Spiritual Meaning was measured through a brief instrument developed by Krause (2003a). This six-item questionnaire measures the degree to which participants' meaning in life is derived from their faith and spiritual beliefs (e.g., "my faith gives me a sense of direction in my life.") Prior research has shown that religious meaning is associated with life satisfaction, self-esteem, and an optimistic orientation to life (Krause, 2003). We also computed a sum score of the six-item questionnaire and utilized such a score in our assessment of religious/spiritual meaning. *Cronbach's* $\alpha = .97$.

Demographics

We also asked participants for their age, gender identity, religious/spiritual background, race, ethnicity, marital status, education, and experiences with mindfulness meditation and mind-body practices (e.g., yoga, tai-chi, qigong). The majority of our participants identified as White (83.6%), 8.3% identified as African American, 7.2% identified as Hispanic; 2% identified as East Asian, 1.4% as Native American, and 0.7% as South Asian. Regarding religious affiliation, 48.5% self-identified as Christian, 39.2% identified as non-religious, 2.4% identified as Buddhists, 1.3% identified as Jewish, 0.9% identified as Muslim, and 0.5% identified as Hindu. On educational attainment, our participants included a generally educated group: 9.7% obtained a graduate degree (e.g., M.S., M.A., doctorate), 33.4% obtained an undergraduate degree (e.g., B.A., B.S.), 28.9% completed some college, 11% obtained an associate degree, 14% obtained up to a high school diploma, and only 0.7% had not completed high school. Finally, on mindfulness and mind-body practices, 15% of our participants reported having a regular mind-body practice such as yoga, chi-gong, tai chi; 17% of our sample reported having a regular meditation practice such as vipassana, mindfulness, Zen, Tibetan, Christian prayer, Transcendental Meditation, etc.;

9% reported having both a mind-body contemplative practice and practicing meditation and 76% of participants reported having neither a meditation nor a mind-body practice.

Data Analyses

Descriptive Statistics

First, we tabulated and processed our data using SPSS. We examined the demographic profile of our participants, and checked for missing data, outliers, and potential patterns in the missingness of data. We also conducted reliability analyses using Cronbach's alpha through all continuous study variables. Overall, 97.8% of our participants completed all items of the SMILE. There were no noticeable patterns among participants who did not complete the items; upon visual inspection and analysis, we found no specific patterns in the missingness of our data. To maximize the inclusion of our analyses, we used a simple imputation technique and procedure as described in the *tidyLPA* software documentation (Rosenberg et al., 2019a). We also preserved participants with missing items in the love scales as we compared profiles across distal outcomes, except in cases in which participants showed missing values specifically on the distal outcomes analyzed. In sequence, we computed and examined the correlation matrix of all subscales of love. Table 9 displays this correlation matrix.

Latent Profile Analysis

Second, we performed a series of latent profile analyses to identify distinct profiles of love. We used the six dimensions of love in the Sorokin Multidimensional Inventory of Love Experience (SMILE; Levin & Kaplan, 2010) as profile indicators. In the empirical and theoretical literatures, latent profile analysis (LPA) is also known as latent class cluster analysis, mixture modeling profile analyses, and mixture modeling. Broadly speaking, LPA fits into the person-centered approaches to statistical modeling. Following general guidelines for LPA (e.g., Pastor et al., 2007), we used the six sum scores of each love dimension as the indicators for our LPA. We then used the R package *tidyLPA* (version 1.0.8; Rosenberg et al., 2019b) for our latent profile analyses. In brief, *tidyLPA* expands and simplifies the *mclust* package for R (Scrucca et al., 2016a), which is mostly used for mixture modeling and cluster analyses. Moreover, *tidyLPA* allows researchers to derive mixture models and to conduct cluster and latent profile analysis using open-source and free software; *tidyLPA* also provides researchers with additional control by letting them set variances and covariances to freely vary across models, to be fixed at zero, or to be set as equal among emerging profiles. This freedom allowed us to compare a large variety of models and to search for more parsimonious and best-fitting profile solutions. A thorough overview and summary of the various parameterization models in LPA may be read in the review by Pastor and colleagues (2007).

Based on the LPA guidelines recommended by Pastor and colleagues (2007), we first examined the fit indices and model solutions from the various parameterizations, allowing variances and covariances to vary or to remain equal, and covariances to vary, to remain equal, or to be kept at zero across several models. Lower indices of AIC and BIC indicate better-fitting models, while higher entropy indicates greater classification accuracy and precision when estimating profile membership for participants. Table 10 summarizes the various model indices and goodness-of-fit information. We ran all four *tidyLPA* parameterizations in present study. Model 1 is the most constraining and restrictive, because variances are held as equal across different profiles, and covariances between indicators are constrained to zero. Model 2 offers additional flexibility, as variances are allowed to freely vary among individual profiles, yet covariances across indicators still remain fixed to zero. Model 3 maintains variances among indicators equal across profiles, but allows covariances among the various indicators to be estimated and kept equal across various profile. Model 4, the most complex overall, allows both variances and covariances across profiles to be freely estimated without constraints among all emerging clusters. In assessing models, goodness-of-fit, and interpretability of profiles, we examined the Akaike Information Criterion (AIC; Bozdogan, 1987), the Bayesian Information Criterion (BIC; Schwarz, 1978), the bootstrapped likelihood ratio test (BLRT), and entropy as the main indices for model-selection. In addition, we used the alpha level .05 for decision-making on better model when likelihood ratio test results applied. We also visually inspected profile, considering distinguishability, meaningful differences in light of theory and the literature at large in order to select a final model.

ANOVAs, Cross-Tabulations, Chi-Square Tests of Proportions

Third, we compared the emerging and selected profiles of love across indices of spirituality, positive psychology, and psychopathology. To perform these comparisons, we conducted a series of ANOVAs, using participants' most likely profile of membership as our independent variable. We also cross-tabulated results and ran Chi-Square Tests of Proportions to identify specific demographics that were associated with the emerging love profiles. When multiple comparisons were performed, we opted for Tukey's HSD procedure along pair-wise multiple comparisons to reduce the chances of Type I errors.

Results

Our first aim was to examine the associations and interrelations among the six dimensions of love. The descriptive statistics for each of the subscales of the Sorokin Multidimensional Inventory of Love Experience (SMILE) were as follows: *biological* love (M = 10.52, SD = 3.91), *ethical* love (M = 14.98, SD = 4.26), *ontological* love (M = 14.63, SD = 3.82), *psychological* love (M = 13.66, SD = 3.88), *religious* love (M = 12.53, SD = 6.24) and *social* love (M = 15.82, *SD* = 2.97). Consistent with Levin & Kaplan (2010), we found positive correlations among all of the six aspects, except for a non-significant association between *biological love* and *religious love* (r = -.011, p > .05). Table 9 displays two-tailed Pearson correlation indices among love dimensions. All other subscales of love were significantly correlated with each other (.197 ≤ r ≤ .724, p < .01). The strongest associations involved *ethical love* and *ontological love* (r = .724; p < .001), *ontological* love and *psychological* love (r = .687, p < .001) and *psychological* love and *ethical* love (r = .582, p < .001). Biological love, in turn, displayed the weakest relationship with all other variables (r = .262 with *ethical*; r = .360 with *ontological*; and r = .197 with *social*). Other remaining correlations were of medium strength. Like Levin & Kaplan (2010), we found biological love to be an outlier among dimensions of love, as it was the only uncorrelated love dimension with *religious* love, and the only to feature correlation of small magnitude with other dimensions.

Table 9: Two-Tailed Pearson Correlation Indices among the Six Dimensions Of Love

	Biological	Ethical	Ontological	Psychological	Religious	Social
Biological	-					
Ethical	.262**	-				
Ontological	.360**	.724**	-			
Psychological	.457**	.582**	.687**	-		
Religious	-.011	.509**	.458**	.340**	-	
Social	.197**	.522**	.566**	.532**	.319**	-

** p < .001.

Second, we performed a series of latent profile analyses to examine whether the various dimensions of love coalesced into meaningful and distinct groups or profiles and whether these emerging profiles were differentially associated with outcome measures of interest. Overall, we found four emerging profiles of love: a *High-Love* (29.4%), a *High-Average* (20.8%), a *Low-Average* (20.6%), and a *Low-Love* (29.2%) profiles. We also found that all four profiles of love presented with significantly different levels across most dimensions of love when compared to each other via ANOVAs and pair-wise comparisons with Tukey's HSD corrections. Table 10 displays results from our latent profile analyses, including AIC, BIC, entropy levels and bootstrapped likelihood ratio test (BLRT) tests two specific parameterizations using *tidyLPA* (J. M. Rosenberg et al., 2019b): Model 1 and Model 3. (Parameterizations using Model 2 and Model 4 were non-computable and therefore unattainable because of the statistical complexity these two parameterizations demand and poor fit with the data.) Table 10 also features profile solutions ranging from 1 through 5 profiles for each LPA model examined. We assessed solutions featuring one through five love profiles per model since, as higher number of profiles increases, group sizes shrink in turn may shrink smaller sizes, thus threatening the validity of generalizability of such groups. Using guidelines and methodological consensus from the extant literature, we prioritized results from models featuring lower AIC and BIC to indicate goodness of fit, higher entropy to suggest classification accuracy and precision, parsimony, and conceptual soundness.

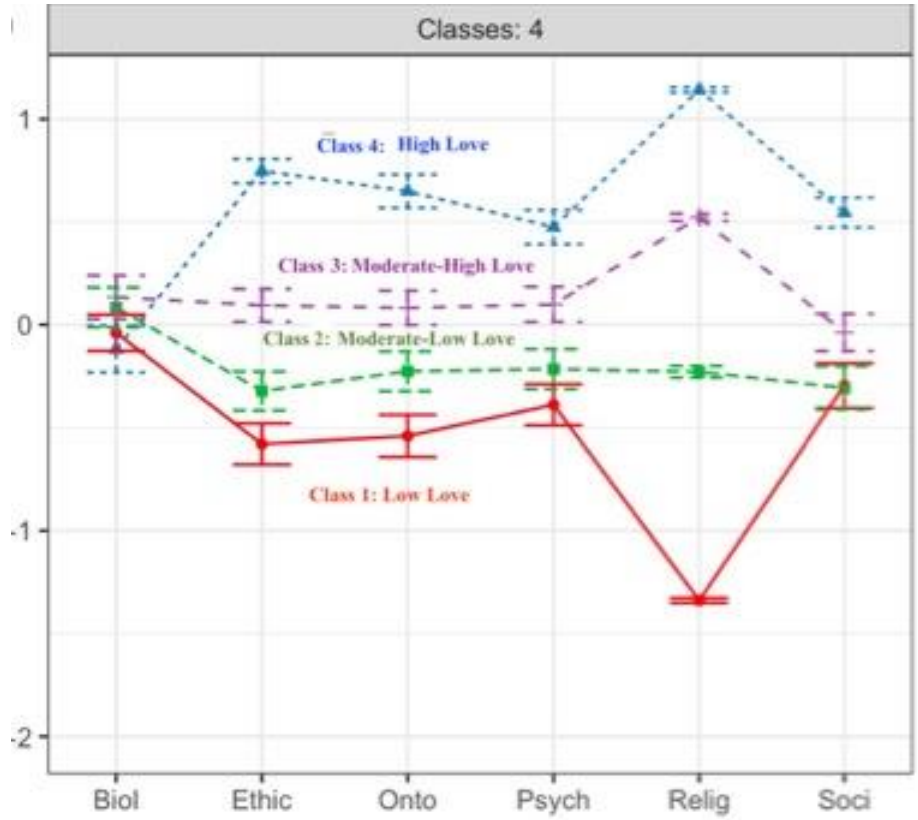
Table 10: Fit Indices and LPA Results Including AIC, BIC, Entropy, Smallest Profile Class, and BLRT for Model 1 and Model 3 Featuring Profile Solutions from 1 Through 5 Profiles

Model	Classes	AIC	BIC	Entropy	Min Prob.	Smallest n	BLRT (p)
1	1	25541	25605	1	1	100%	-
(equal var.,	2	23258	23359	0.84	0.92	32%	.01
covar. zero)	3	22478	22616	0.81	0.90	15%	.01
	4	22076	22251	0.85	0.91	16%	.01
	5	21830	22042	0.85	0.78	10%	.01
3	1	21777	21921	1	1	100%	-
(equal var.,	2	21150	21331	0.90	0.95	35%	.01
equal covar.)	3	20653	20871	0.92	0.90	22%	.01
	4	**20167**	**20422**	**0.97**	**0.95**	**21%**	**.01**
	5	20030	20322	0.92	0.82	10%	.01

Note. AIC: Akaike Information Criterion; BIC: Bayesian information Criterion; BLRT: Bootstrapped likelihood ratio test. Min. Probability: the minimal probability value for assignment to one of the classes within this specific profile solution. Equal var: equal variances; Covar zero: covariances restricted to zero; Equal covar: equal covariances. The boldened and underlined row indicates the selected profile model solution for subsequent analyses.

As Table 10 indicates, *tidyLPA* (Rosenberg et al., 2019b) generated profile solutions using two specific model parameterizations: Model 1 and Model 3. Model 1, estimating and equalizing variances while fixing covariances at zero among indicators, presented with notably higher—and therefore not-as-well-fitting—goodness-of-fit indicators such as AIC and BIC values. By contrast, Model 3, freely estimating variances and covariances while equalizing both across profiles, generated solutions with the lowest—and therefore best-fitting—AIC and BIC values, suggesting better model fit. We examined all Model 3 results when ultimately deciding for the specific, best-fitting profile solution, and we found the four-profile classification under Model 3 to outperform all other possible profiles solutions derived from either Model 1 or Model 3 for several reasons. First, the four-profile solution under Model 3 featured significantly lower AIC and BIC than all previous profile solutions featuring only 1, 2, or 3 profiles. Second, the four-profile solution presented with a much larger improvement in goodness-of-fit indices (i.e., AIC and BIC) relative to the three-profile model compared to the improvement found between the four-to-five profiles solutions. Third, the four-profile solution under Model 3 presented with the highest entropy levels, suggesting high model precision and classification accuracy. Finally, the four-profile group included the least dense profile featuring 20% of the sample, compared the smallest profile within the fifth-option, whose smallest group size only 10% of the sample. Research consensus holds that small group sizes may threaten the generalizability of findings. In sequence, we visually inspected emerging profiles for theoretical meaning. Figure 3 depicts the four-profile solution, with standardized means across the six dimensions of love. All subsequent analyses were conducted comparing these four profiles of love generated through Model 3.

Figure 3: Line graph indicating the four-profile solution featuring standardized mean values (z) on the y-axis and each of the six dimensions of love as the LPA indicators on the x-axis.



Note. Biol: biological love; Ethic: ethical love: Onto: ontological love; Psych: psychological love; Relig: religious love; Soci: social love. Bars represent 95% confidence intervals around the standardized mean value for a given indicator. Profile 1: Low Love (29.2%); Profile 2: Average-Low Love (20.6%); Profile 3: Average-High Love (20.8%); Profile 4: High Love (29.4%).

In total, 29.2% of participants presented with low levels of love across most aspects of love ($-1.34 \leq z \leq -0.04$), except for *biological love* (z = -0.04) and with especially low levels of *religious* love ($z = -1.34$). We labeled this profile "*Low Love.*" By contrast, 29.4% of participants presented the opposite pattern: elevated levels among almost all dimensions of love ($0.47 \leq z \leq 1.14$), except for *biological* love ($z = -0.09$), and especially elevated indices of *religious* love ($z = 1.14$). We labeled this profile "*High Love.*" Third, 20.8% of our sample displayed marginally above-average indices across most dimensions of love ($-0.04 \leq z \leq 0.51$), except for *religious love* ($z = 0.51$), which was more pronounced than other aspects of love in this profile. We named this profile "*High-Average Love.*" Finally, 20.6% of our sample showed low-average indices among five of six dimensions of love ($-0.32 \leq z \leq -0.21$), except for biological love ($z = 0.08$). We labeled this profile "*Low-Average Love.*" To reiterate, these four profiles of love displayed distinct levels across most dimensions of love when compared to each other via ANOVAs and pair-wise comparisons with Tukey's HSD corrections. The exceptions were *biological love*, which was practically the same among all four profiles, and *psychological* and *social* love, which were similar between the L*ow-Love* and *Low-Average* love groups, but different when comparing the *High Love* and the *High-Average Love* with other profiles. Table 11 displays the means and standard deviations of the six dimensions of love for each of the four emerging profiles of love, where higher scores represent higher levels of love indicators.

Table 11: Standardized Means and Standard Deviations on Love Subscales For each Multidimensional Profile of Love

	Profile 1 (29.2%)	Profile 2 (20.6%)	Profile 3 (20.8%)	Profile 4 (29.4%)
	Low Love	Low-Average Love	High-Average Love	High Love
Type of Love	*M* (*SD*)	*M (SD)*	*M (SD)*	*M (SD)*
Biological	-0.04_{ab} (0.93)	0.08_{ab} (0.87)	0.11_{a} (0.94)	-0.09_{b} (1.16)
Ethical	-0.58a (1.08)	-0.32b (0.85)	0.08c (0.67)	0.74d (0.65)
Ontological	-0.54a (1.08)	-0.22b (0.80)	0.07c (0.69)	0.64d (0.82)
Psychological	-0.39a (1.08)	-0.21a (0.87)	0.08c (0.80)	0.47d (0.92)
Religious	-1.34a (0.10)	-0.23b (0.25)	0.51c (0.13)	1.14d (0.13)
Social	-0.30a (1.19)	-0.30a (0.93)	-0.04c (0.73)	0.54d (0.74)

Note. Means sharing a subscript in a row indicate they were not significantly different from each other (i.e., $p > 0.05$) using Tukey's HSD correction for multiple comparisons.

Our third and final aim was to examine whether the four emerging profiles of love were differentially associated with markers of well-being, psychopathology, and spirituality. To assess these potential differences, we conducted a series of ANOVAs, entering profile membership as our independent variable, and each continuous outcome as outcome variable. Results from omnibus ANOVAs suggested significant differences among the four profiles on all measures of both psychopathology, well-being, and spirituality. People in the *High Love* profile presented with the highest levels of well-being, satisfaction with life ($z = 0.33$), gratitude ($z = 0.57$), and positive emotion ($z = 0.42$), with the highest indices of religious meaning ($z = 1.03$) and personal spirituality ($z = 0.88$), as well as with the lowest markers of depression ($z = -0.23$), anxiety ($z = -0.17$), and negative emotion ($z = -0.18$) among all four profiles. In turn, findings among the other three profiles were more nuanced. The *High-Average* profile displayed the second highest level of personal spirituality ($z = 0.32$), of religious meaning ($z = 0.44$), as well as of life satisfaction ($z = 0.06$) and positive emotion ($z = 0.01$), but no different levels in anxiety or depression compared to the *Low-Love* and *Low-Average Love*. On the opposite end, the *Low-Average* profile featured the second lowest levels of religious meaning ($z = -0.35$) and personal spirituality ($z = -0.31$), and lower-than-average indices in positive psychology ($-0.32 \leq z \leq -0.15$), though many of these indices were not significantly different from the *Low-Love* profile. Finally, the *Low-Love* profile displayed the lowest levels of religious-meaning ($z = -1.11$) and personal spirituality ($z = -0.90$), as well as low indices of positive psychology ($-0.12 \leq z \leq -0.28$), and psychopathology, though with levels not significantly different from those of participants in *Low-Average* profile. Three of four profiles (i.e., *Low Love*, *Low-Average Love*, and *High-Average love)* were not statistically different from each other in anxiety and depression scores, and the only profile significantly different from all else was the *High Love*, which also appeared to be significantly more spiritual, more well-adjusted, and the least depressed and anxious among profiles. Table 12 summarizes the means, the standard deviations, and the *F* statistic comparing means across profiles of love.

Table 12: Means and Standard Deviations for Standardized Outcome Measure by Profile and F-Statistic of ANOVA Tests Comparing Four Profiles of Love under Model 3

	Low Love	Low-Average Love	High-Average Love	High Love	*F*
Psychopathology					
Anxiety	0.01_{abcd} (0.98)	0.09_{abc} (1.01)	0.14_{abc} (1.03)	-0.17_{d} (0.96)	7.144*
Depression	0.04_{abc} (1.00)	0.16_{abc} (1.01)	0.11_{abc} (1.06)	-0.23_{d} (0.90)	11.759*
Neg. Emotion	-0.01_{ad} (0.98)	0.07_{ab} (1.03)	0.21_{b} (1.15)	-0.18_{d} (0.83)	9.543*
Well-Being					
Gratitude	-0.28_{ab} (1.09)	-0.32_{ab} (0.99)	-0.11_{ac} (0.85)	0.57_{d} (0.72)	81.47*
Self-Compassion	-0.12_{abc} (1.00)	-0.15_{abc} (0.97)	-0.12_{abc} (0.89)	0.31_{d} (1.02)	20.32*
Life Satisfaction	-0.18_{ab} (1.02)	-0.29_{ab} (0.99)	0.06_{c} (0.92)	0.33_{d} (0.93)	30.29*
Subj. Vitality	-0.16_{abc} (1.01)	-0.28_{ab} (1.01)	0.00_{ac} (0.87)	0.36_{d} (0.95)	32.07*
Social Support	-0.18_{ab} (1.08)	-0.28_{ab} (0.97)	0.00_{c} (0.90)	0.37_{d} (0.88)	34.54*
Positive Emotion	-0.22_{ab} (0.96)	-0.31_{ab} (0.97)	0.01_{c} (0.95)	0.42_{d} (0.96)	43.31*
Spirituality					
R/S Importance	1.18_{a} (0.55)	1.73_{b} (0.93)	2.64_{c} (0.94)	3.37_{d} (0.82)	607.15*
Rel. Meaning	-1.11_{a} (0.40)	-0.35_{b} (0.64)	0.44_{c} (0.53)	1.03_{d} (0.49)	1391.17*
Spirituality	-0.90_{a} (0.76)	-0.31_{b} (0.76)	0.32_{c} (0.66)	0.88_{d} (0.61)	507.05*
Age	32.97_{a} (10.09)	33.92_{a} (10.19)	34.97_{a} (10.55)	37.94_{d} (11.99)	14.65*

Note. Anxiety Symptoms: GAD-7: Generalized Anxiety Disorder-7 Questionnaire; Depression Symptoms: PHQ-9: Patient Health Questionnaire-9; Negative Emotion: PANAS-NA: Negative Affect; Gratitude: Gratitude Scale; Self-Compassion: Self-Compassion Scale; Life Satisfaction: Satisfaction with Life Scale; Subjective Vitality: Subj. Vitality Scale: Perc Social Support: Perceived Social Support; Positive Emotion: PANAS-PA: Positive Affect; R/S Importance: Religious/Spiritual Importance; Rel. Meaning: Religious Meaning Scale; Spirituality: Delaney Spirituality Scale. Means sharing a subscript in a row indicate they were not significantly different from each other (i.e., $p > .05$). *$p < .01$.

Finally, we conducted a series of cross-tabulation and chi-square tests of proportion of demographic characteristics to examine the association between profiles and demographic information. We found that the *High Love* class was the oldest group among all other profiles ($M = 37.94$, SD = 11.99), whereas none of the other three profiles were significantly different from each other in age. In addition, the *High Love* profile endorsed the highest levels of religious/spiritual importance ($M = 3.37$, SD = 0.82), compared to all other three groups ($F = 607.15$, $p < .001$). Post-hoc ANOVAs also suggested a linear increase of perceived spiritual importance per profile, with the *high average* displaying the second highest score ($M = 2.64$, *SD*

= 0.94) followed by the *low average* (*M* = 1.73, SD = 0.93) and finally by *low love* (*M* = 1.18, *SD* = 0.55).

Discussion

The present study provided evidence for four profiles of love in the United States. Through a series of latent profile analyses using data from 1,499 U.S. adult participants who completed the Sorokin Multidimensional Inventory of Love Experience (SMILE; Levin & Kaplan, 2010), we found a *High Love* profile, which was significantly above average across five of six dimensions of love, a *Low Love profile,* which was below average across most dimensions of love (except for *biological* love), and a *High-Average* and a *Low-Average* profiles, with intermediate levels across love dimensions. Comparisons of distal outcomes showed that love profiles were differentially associated with markers of spirituality, and, in nuanced ways, with markers of well-being and psychopathology as well. Importantly, people classified as belonging to the *High Love* profile endorsed significantly higher levels of *religious love* and spirituality and presented as the most well-adjusted and least anxious of all profiles. By contrast, people classified into the *Low Love* group were the least spiritually-identified; those in the *Low-Average* profile alongside those classified into the *Low Love* group demonstrated the lowest levels of life satisfaction, perceived support, positive emotion, and spirituality. In turn, the *High-Average* profile demonstrated intermediate levels of life satisfaction, social support, positive emotion, and overall spirituality, just below those in the *High-Love* group. Notably, only people in the *High-Love* group displayed lower anxiety, depression, and negative affect compared to all three profiles.

We found three results specially striking. First, the six aspects of love (Levin & Kaplan, 2010) did not equally contribute to determining and setting love profiles apart. For example, *biological* love, which focuses on pleasure-seeking, and *social* love, focusing on an attitude of friendliness towards others, emerged as virtually indistinguishable across all four love profiles. By contrast, *religious love* presented with striking differences among the four profiles and served as the greatest profile determinant and differentiator. Put simply, while pleasure-seeking tendencies (i.e., biological love), and general attitudes toward social bonding (i.e., social love) were superfluous indicators of profile membership, r*eligious love* (i.e., feeling loved and embraced by a higher power or God) was an extraordinary marker distinguishing the four profiles. This finding is central, and bears resemblance with prior research on the epidemiology of love (Levin, 2001, 2023) and with the close associations between religious love, spiritual coping, and well-being (Ano & Vasconcelles, 2005). In fact, growing empirical literature attests that agnostics who, despite no conscious endorsement of belief in God or a higher power, felt accepted and loved by a presupposed deity or force, experienced more gratitude, life satisfaction, and self-esteem (Byerly, 2023). By contrast, "resisting God's love and anxious God attachment were negatively correlated with indicators of well-being and positively correlated with indicators of well-being" (Byerly, 2023, p. 71). Moreover, people who hold loving images of God demonstrate robust and consistent higher levels of meaning and purpose in life (Stroope et al., 2013). Our research expands on these findings by demonstrating that, should researchers measure only one dimension of love to determine love profile, religious or spiritual love (i.e., perceived or felt love toward and from a higher power, sacred being, or ultimate reality) would likely be the most useful indicator. Future research may explore the mechanisms through which a perceived loving relationship with a higher power or God exerts its effects on improved mental health and well-being. Researchers may also consider candidates pertinent to positive religious coping (Abu-Raiya & Pargament, 2015), secure attachment toward God (Beck, 2006; Leman et al., 2018), and, as Stroope and colleagues (2013) reflected, the relationship between one's image of God and one's self-image.

Second, people classified into *High-Love* profile, who tended to cultivate, maintain, and endorse an interconnected, love-based mindset as the orienting force and principle in life, displayed greater well-being, lower psychopathology, and were also the most spiritual of all. In addition, they also endorsed extraordinary levels especially of *religious love,* which involves feeling embraced, accepted, and love by a higher power or God. These findings also have meaningful precedent in the clinical and psychological literature. For example, Ai and Hall (2011) found that *divine/religious love,* in particular, was associated with positive coping among survivors of serious cardiac surgeries who faced existential issues. More recently, reviewing the burgeoning epidemiology of love Levin, (2000, 2023) summarized the salutary effects of love for physical and mental health, which included negative associations with physical comorbidities such as angina and ulcers, chronic illness, and cancer mortality. In tandem, the nascent study of neuroendocrinology of love also demonstrates that loving, pleasurable, and joyful cognition and behavior modulates the autonomic nervous system and regulates the hypothalamic-pituitary-adrenal axis in mitigating the adverse effects of chronic stress (Esch & Stefano, 2005). Growing evidence also demonstrates that oxytocin, often regarded as the substrate for bonding, interpersonal warmth and love, has been associated with positive health outcomes and may be an important mediator between prosocial behavior, social bonding, love, and improved health (Poulin & Holman, 2013). Finally, specific loving-kindness meditations, which invoke various dimensions of interpersonal warmth, empathy, interconnectedness, and love, have been linked with significant reductions in anxiety, increases in prosocial behavior, relaxation, and self-efficacy (Galante et al., 2016), just as our *High Love* profile demonstrates.

Third, we also found a significant relationship between love indices and spirituality: participants with higher levels of love also reported stronger feelings of religious meaning and spirituality. By contrast, we found a non-linear, non-monotonic relationship among love profiles and indices of well-being, as well as among love profiles and indices of depression and anxiety. Participants who identified as the most spiritual, or in highest quartile of spirituality, presented with the lowest levels of anxiety and depressive symptoms. Prior research corroborates this finding and suggests that spirituality may be especially protective to people who rate spirituality specifically as “highly important” versus “important” or “not important” in their lives (McClintock et al., 2016; Miller et al., 2014b). As prior studies suggest, we reflect that those whose lives center around existential questions and spiritual reflection and who develop a spiritual view of human existence as non-contingent on outwardness, as holding inherent dignity may also present with the highest levels of love**.** Those who endorse the highest levels and experiences of love might also report the highest sense of spiritual meaning and connection. This positive association between spirituality, love, and improved mental health outcomes might be linear in some respects, but non-linear in others. One option is that cultivating strong feelings of and beliefs about love as central may promote well-being, reduce psychopathology, anxiety, and depression, and manifest as increased spirituality. Future longitudinal research assessing the development and trajectories of love may help address fundamental questions of causality between spirituality and subjective experiences of love.

The present study also contrasts prior research literature on social sciences examining love. As we discussed earlier, much of prior research examined love as an interpersonal experience as a social phenomenon (Sternberg et al., 2006; Sternberg & Sternberg, 2018). By contrast, ours assessed *beliefs* and *subjective experiences of love*. In other words, our findings demonstrate that people's beliefs about love, especially their ontological, ethical, and spiritual views, were key markers of most likely love profile one was likely to be a part of. This shift in perspective is significant and matches the general framework linking depth concepts such as identity, worldview, and core beliefs with coping and general well-being (Lewis Hall & Hill, 2019). In the clinical literature, examining and addressing core beliefs represents a major aspect of cognitive behavior therapy (e.g., Dozois et al., 2014; Koerner et al., 2015) and other general therapeutic approaches. From our data, we propose that upholding love as a primary self-organizing and guiding principle in life may be linked with well-being through a variety of pathways, including positive spiritual coping (Ano & Vasconcelles, 2005) and the putative identification with or introjection of traits believed to be true in a higher power or God. For those with ongoing experiences of contemplative and mindfulness practice, contemplative practices accentuate innate feeling of safety and security and of love, allowing for the positive distal outcomes of greater well-being and life satisfaction, as our data suggest. Even in an increasingly secular world, love and spirituality may emerge as people engage in secular practices such as mindful awareness, which has been recently considered an inherently ethical practice, warm, gentle, and caring practice (e.g., *heartfulness;* Maurits Kwee, 2015; Voci et al., 2019). Mindful self-compassion, for example, held as generally secular practice, has been linked with increases both in loving-kindness, self-compassion, and other-focused compassion (e.g., Boellinghaus et al., 2014; Fulton, 2018), all of which have shown parallels with spirituality. These may be some mechanisms via which love emerges, remains, and grows. Finally, people who live through mystical experience also routinely describe a palpable surge in subjective feelings of love and spirituality (Woollacott & Shumway-Cook, 2020). Our profiles of love, in sum, show a powerful link between love, especially religious, lower depression and anxiety, and spirituality. Future research may address the mechanism and mediators for these links.

Clinical Implications

Both in clinical and in Western circles, love has long been set apart as abstruse, broad, elusive, and hard to quantify. However, growing research indicates that love may be as relevant and as important an experience both for mental and physical health (Davis et al., 2021; Esch & Stefano, 2005; Levin, 2001). We see several applications and implications of our findings for clinical and therapeutic practice. For example, in spiritually-informed psychotherapy, clinicians may inquire about the extent to which their patients have felt loved and currently experience love to gauge risk, prognosis, and disposition. Using instruments such as the negative core beliefs inventory (Osmo et al., 2018), researchers may also examine the strength of *unlovability* beliefs, and the extent such pattern is associated with a higher power or a person's spirituality. Distinct mechanisms may explain the strong association we found between love types, and elevations in religious love in particular, with the many well-being and positive mental health outcomes, as our data suggest. For example, people who experience love and religious love experience be more likely to relying on positive religious/spiritual coping when handling challenges and life stressors (Abu-Raiya & Pargament, 2015; Ai & Hall, 2011). In fact, growing empirical evidence indicates that spirituality can be used as a significant source of relief and coping with life's challenges and adversities (Ano & Vasconcelles, 2005; Bjorck & Thurman, 2007). Evidence also suggests that people rely on spirituality when confronting grief, loss, sadness, divorce, terminal illnesses, and various other major life stressors (Halifax, 2021). Second, people who endorse beliefs such as that love is eternal, that love lives on, and who count on a spiritual source of love for everyday life may also experience more resilience-prone core beliefs, such as one of interconnectedness or oneness with a Higher Power or sources of comfort, love, wisdom, and support. Such expanded sense of identity and established transpersonal identity and awareness is known in the literature by a variety of names, such as interconnectedness, continuity of the "self-other" (Aron et al., 1991, 1992; Aron & Fraley, 1999), among others, which may promote well-being. Third, people with clearer and improved sense of love may develop more secure and well-established interpersonal attachment, with more stable and fulfilling interpersonal relationships, and subsequent expanded sense of support. The relationship between attachment profiles and love orientation and approach has long been examined, especially in the interpersonal domain romantic relationship (Hazan & Shaver, 2017). Little, if any, research to date has examined the explicit link between transpersonal endorsement of love and interpersonal attachment styles. Finally, with increasing numbers of interpersonal love scales assessing romantic and interpersonal aspects of love (e.g., Hendrick et al., 1998; Rubin, 1970; Sternberg, 1996), an overarching meta-analysis and factor-analytic approach might consider testing whether a larger subset of subscales comprises a factor that involves the higher dimensions of religious love, or whether only interpersonal dimensions remain.

Limitations and Recommendations for Future Research

Like any other study, ours has several limitations. First, our research relies on cross-sectional design and cross-sectional data, limiting our ability to draw causal inferences; we are unable to conclude that belonging to the *High Love* profile, for example, marked by the strongest beliefs and experiences of love, caused people to feel less anxious, less depressed, or to experience higher levels of well-being and spirituality. By design, cross-sectional research allows for the possibility that, instead, lower levels of depression, anxiety, and more positive emotion and life satisfaction, might have led people to stronger love beliefs and love experiences. Future research could employ longitudinal methods, such as latent transition or latent growth analysis (Lanza et al., 2003), to examine how self-compassion profiles emerge, develop, change over time, how stable they are, causal paths between profiles and correlates. Second, our study relies on self-report data. Naturally, self-report data are subject to various reporting biases, such as the halo effect, underreporting bias, and inattention (Chan, 2009; van de Mortel, 2020). Although no definite, reliable, and validated behavioral methods have been developed for love, future studies might develop and employ multi-trait frameworks to cross-validate behavioral and self-report indicators of love. Such multi-method would greatly enrich the field. Studies that choose to incorporate self-report and emerging behavioral data would also be essential in converging people's self-report experiences with the observable changes in physiological and neurological markers of love experience. Finally, our study examined a US-based adult sample only, limiting our scope of inferences and conclusions to the United States. Because love may be both a universal and a culturally-specific phenomenon (Jankowiak & Fischer, 1992; Kim & Hatfield, 2004; Shaver et al., 1996), future research that expands populations under study and which includes distinct cultural, ethnic, racial, and national backgrounds is warranted. Mounting evidence also suggests that different types or experiences of love may demonstrate unique patterns of brain region activation and neural networks implicated. For example, the periaqueductal gray and the putamen have been implicated especially with maternal forms of love (Shih et al., 2022). Future interdisciplinary research that bridges neuroscience underpinnings of love with psychological manifestations might further clarify these patterns. Future research might also tackle the neurological nuances and underpinnings of love using Sorokin's conceptualization and investigate whether members of distinct profiles of love show differential patterns of activation, and/or different strengths of activation in brain regions previously associated with love experience.

Conclusions

We found that specific beliefs about and subjective experiences of love experiences go hand in hand in hand with spirituality, religious meaning, well-being, and lower psychopathology. People who endorsed strong beliefs about various love types, especially *religious love,* showed the lowest levels of anxiety and depression, and greater life satisfaction, gratitude, subjective vitality, and perceived social support. Incrementally, we found that as identification with love increased across profiles, people showed gradual increases in spirituality and religious meaning as well. By contrast, this relationship was distinct among indices of psychopathology and positive psychopathology, since the relationship with love appeared more nuanced: only *High love profile* seemed showed the highest positive psychology and the least depression and anxiety, while the other three profiles (i.e., *High-Average*, *Low-Average*, and *Low Love*) did not appear were not significantly difference from each other among these three dimensions. This suggests a non-monotonic relationship between love profiles, psychopathology, and positive psychology, indicating that the benefits of *love experience* may come not in linear fashion, but potentially as a paradigm shift for those who may turn love as a life orientation. Most striking, we found *religious love* to play a central role in estimating profiles of love: people who experience feelings of being loved by a higher power or by God strongly correlated with class membership and, in turn, with well-being, depression, anxiety, and overall levels of spirituality. Love and religious/spiritual experiences of love, we find, deserves further study and consideration by social scientists and researchers.

Chapter 3: Integrative Summary, Conclusions and Directions

General Summary

Across our empirical studies, we examined three important aspects of human perception: *mindfulness*, *self-compassion*, and *love*. We showed how distinct profiles of mindfulness, self-compassion, and love were differentially associated with meaning and spirituality, with well-being and social support, and with mental health via lower indices of depression and anxiety. We consistently found that those who were most mindful, loving, and self-compassionate presented as the most spiritual, with the highest levels of meaning and purpose, religious meaning, subjective vitality, satisfaction with life, perceived social support, and with lowest levels of depression and anxiety. Upon reviewing and integrating our studies, we believe these patterns are important and that they voice a deeper shared mechanism among them. Through this concluding integrative summary, we review and relate our findings as we expand on the comprehensive framework of relational spirituality (Sandage et al., 2020; Tomlinson et al., 2016). In particular, we advance the view that these three fundamental aspects of relational spirituality interconnect, interrelate, and hold the benefits of mindfulness, self-compassion, and love together via a single, unified umbrella.

Relational Spirituality

To review, relational spirituality concerns the ways in which we relate to the sacred or the transcendent as well as to the sacred in fellow human beings and in ourselves (Sandage et al., 2020). Broadly speaking, spirituality encompasses the "search for the sacred" (Hill & Pargament, 2003, p. 65) inclusive of theistic and non-theistic worldviews, and encompassing "concepts of God, the divine, Ultimate Reality, and the transcendent" (p. 65), however one defines the ultimate and transcendent in one's life. Relational spirituality, in turn, builds on and extends the theory of such “search for the sacred” (Hill & Pargament, 2003 p. 65), and places it within a foundationally relational paradigm (e.g., Desrosiers & Miller, 2007; Hall, 2021; Sandage & Shults, 2022). In their Relational Spirituality Model (RSM) Sandage and colleagues (2020) outlined three interconnected and distinct developmental processes—*attachment*, *differentiation*, and *intersubjectivity*—as foundational for spiritual, existential, and relational development. We propose that it may be through these three relational developmental paradigms that our three distinct and flourishing profiles of mindfulness, self-compassion, and love may be linked with thriving and well-being.

Relational Spirituality and Attachment

Sandage and colleagues (2020) described *attachment* as a primary developmental system via which relational spirituality emerges. Attachment organization, they reviewed, involves emotional, cognitive, and relational processes that emerge early on in development through relationships with primary attachment figures (Ainsworth & Bowlby, 1991). Ultimately, Sandage and colleagues (2020) proposed, attachment processes are concerned with our fundamental senses of safety, security, and with the dialectical relationship between exploration and safety. In line with this claim, growing empirical research documents that healthy attachments form a critical substrate on top of which emotion regulation (e.g., Mikulincer & Shaver, 2019), mentalization (e.g., Fonagy & Luyten, 2018), rupture and repair, and adaptive coping with anxiety emerge (e.g., Manning et al., 2017). Thus, secure, appropriate, and safe attachment styles may be the conduit through which interpersonal and transpersonal senses of a “safe haven” and a “secure base” (Sandage et al., 2020, p. 117) for comfort and protection, for appropriate “exploration” and “assertion” become possible. In our view, mindfulness, self-compassion, and love, may be intimately and intrinsically linked with such attachment processes and relational development.

Attachment and Mindfulness

Mindfulness has been implicated as crucial for various interpersonal domains and skills, including in facilitating empathy and interpersonal awareness and in promoting relationship quality and satisfaction (Cheang et al., 2019; McGill et al., 2016; Quinn-Nilas, 2020). Specifically, ongoing research links mindfulness with adaptive and improved attachment quality (Stevenson et al., 2017). For instance, following a mindfulness-based retreat , practitioners exhibited significant reductions in anxiety attachment and anxiety avoidance (Sahdra et al., 2011). Moreover, correlational studies endorse a robust association between mindfulness and attachment security (Stevenson et al., 2017). Though not addressing attachment processes directly, our own research found the *High Mindfulness* profile to consistently demonstrate the highest perceived social support, the least anxiety and depression, and the lowest indices of religious struggle (De Souza Marcovski & Miller, 2022). By contrast, the *Low Mindfulness* profile endorsed greater religious struggle and lower perceived social support, attachment insecurities and difficulties. Though the direction of causality between mindfulness and secure attachment remains undetermined, and scholars remain unable to affirm whether mindfulness leads to healthier attachment profiles, or secure attachment, in turn, explains increased mindfulness, we maintain that present-moment, non-judgmental awareness might still mitigate the anxiety and avoidance typical of insecure attachment styles. Future longitudinal research specifically assessing attachment orientations and profiles of mindfulness may elucidate this link and provide us with potential developmental pathways for this important relationship.

Attachment & Self-Compassion

Second, self-compassion has also been implicated with a host of interpersonal qualities, skills, and domains (Jacobson et al., 2018). In fact, by definition and embedded in the construct itself, self-compassion has been linked with a lowered sense of isolation from others (Neff, 2003a; Neff, 2003b). Besides, growing empirical support also shows close associations between self-compassion and increased perspective-taking, empathy, and relationship satisfaction (Lathren et al., 2021; Neff & Pommier, 2013). Specific to the attachment literature, however, Brophy and colleagues (2020) found that self-compassion is linked with more secure attachment, while self-coldness and self-criticism, in turn, are linked with more insecure and avoidant attachment profiles. Interestingly, both self-warmth and self-coldness dimensions embedded in the overall measurement of self-compassion emerged as mediators between attachment anxiety or avoidance and depressive symptoms (Brophy et al., 2020). Of note, self-coldness, or the negative subscales of self-compassion, was more strongly liked with and a more robust mediator between attachment and depression. Bolt and colleagues (2019) also found self-compassion to mediate the link between attachment anxiety and relationship quality. In our second empirical study, the *Self-Loving: Compassionate Self-Responding* profile demonstrated higher levels of well-being, increased perceived social support, higher religious meaning and spirituality, and indices of vitality, life satisfaction, positive emotion, and thriving, in ways that support past research on the topic. Promising evidence further demonstrates that self-compassion mediated the association between the quality of one's attachment to God, and levels of depression, anxiety, and life satisfaction (Homan, 2014). Put simply, people who are anxious or uncomfortable in relating to a transcendental, sacred, or higher being, concept, or reality may also have difficulties extending warmth and love toward themselves (Homan, 2014). Future research will be crucial in elucidating the direction of causality and the link between spirituality, self-compassion, attachment. Still, we have reason to consider that self-compassion may exert its positive effects with safer and more secure attachment processes.

Attachment & Love

Needless to say, love is the quintessential relational emotion. In addition, love and attachment have been hailed as intimately interrelated concepts, as a vast body of theoretical and empirical research attests (Hazan & Shaver, 2017, 1990). Recent theory and empirical research also support the view that attachment qualities are intrinsic to loving relationships (Berscheid, 2006, 2010; Hendrick & Hendrick, 1989; Rubin, 1970). Although the literature on multidimensional, spiritual, religious, and transpersonal dimensions of love remains scarce, we have reason to believe that a similar association emerges for Sorokin's multidimensional, transpersonal theory of love. Though no particular study has examined Sorokin's types of love and attachment per se, we also expect close links between Sorokin's love dimensions and secure attachment. In fact, according to the *correspondence* hypothesis (Granqvist, 1998) linking formative attachment experiences and religious or spiritual attachment, people generally tend to show a resonance, or correspondence, between their attachment orientation toward the sacred with prior interpersonal relationships and attachments (McDonald et al., 2005). In our third empirical study, we found that *High Love* profile demonstrated unique peaks in flourishing, well-being, and spirituality, and also indicated greater perceived social support. Though insufficient and imprecise in measuring attachment per se, these parallels are encouraging. Future research examining love profiles, spiritual and religious attachment, and mental health outcomes may investigate how love might influence or mediate the relationship between healthy, balanced attachment orientations and general health and well-being.

Differentiation of Self and Other, and Relational Spirituality

Sandage and colleagues (2020) also emphasized *differentiation* as the second pillar of relational spirituality. *Differentiation*, the authors wrote, involves the integration of three interrelated processes and dimensions: 1. self-regulation of emotions and thoughts (i.e., intrapsychic dimension), 2. a relational balance between connection and autonomy (i.e., interpersonal dimension), and 3. effective relating across social and cultural differences (i.e., intercultural dimension; Sandage et al., 2020). Sandage and colleagues (2020) suggested that *differentiation* provides the substrate for acknowledging, managing, accepting, and adapting to interpersonal differences, and for navigating the dialectic between our intrinsic "oneness" and outward "otherness." Sandage and colleagues (2020) indicated that, "whereas the attachment system orients primarily toward security and the balancing of safety and exploration, the differentiation system deals with self-identity and the flexibility of selfhood to balance cooperation and boundaries amidst difference" (p. 131). We believe that mindfulness, self-compassion, and love play a crucial role in healthy *differentiation* and, in turn, in psychological and spiritual development as a whole.

Differentiation and Mindfulness

Mindfulness has been considered instrumental for the development of self-awareness, affect regulation, and for a more flexible sense of self (Atkins & Styles, 2015; Shapiro et al., 2006). Decentering, for example, defined as the ability to observe thoughts, emotions, and experiences without over-identification, a core part of mindfulness practice, has been closely linked with both mindfulness and improved mental health outcomes (Hayes-Skelton & Graham, 2013; Sauer & Baer, 2010). In addition, mindfulness has also been shown to increase perspective-taking, prosocial behavior, which may both be implicated in differentiation and self-development (Berti & Cigala, 2022). Practically, and relevant to the intercultural dimension of differentiation (Sandage et al., 2020), mindfulness training has also been linked with increased effectiveness in navigating issues of cultural diversity, humility, and differences (Masuda, 2014). Overall, we found our *High Mindfulness* profile to stand out in measures of well-being, spirituality, lower depression, anxiety, and negative emotion. Though our evidence remains generalized and beyond the scope of identity-development, individuation and differentiation, we note our findings as exploratory and as important starting points for future studies. Future research, we hope, might explore whether mindfulness profiles differentially associate with patterns of differentiation, self-awareness, and individuation, and employ specific target variables as proxies of healthy differentiation of self.

Differentiation and Self-Compassion

Self-compassion has also been implicated with self and identity development, especially in our relationship with ourselves (Neff, 2003), though mechanisms remain under investigation. In adolescence, when many experience acute concerns with self-evaluation, belonging, body image, self-compassion appeared especially protective: though most teenagers endorsed harsh, critical, and unfavorable self-esteem, those who maintained a self-compassionate stance displayed the highest levels of well-being and the lowest levels of psychological distress (Neff & McGehee, 2010). These findings, the authors suggested, may be due to “fewer harsh judgments when adolescents confront disliked aspects of themselves,” to more “interpersonal connectedness,” thus “prevent[ing] adolescents from obsessively ruminating on pessimistic thoughts and emotions” (Neff & McGehee, 2010, p. 226). We concur with these assessments and emphasize that growing evidence also links self-compassion with altruism, empathy, compassion, perspective-taking, forgiveness, and lower personal distress (Neff and Pommier, 2013), all of which emerge as fundamental for interpersonal relating and for healthy functioning and differentiation. Our own *compassionate, self-responding* profile presented with the most gratitude, life satisfaction, perceived social support, distinct spirituality lower anxiety and depression, and highest levels of subjective vitality. Though not directly tapping into differentiation-focused measures, our results are encouraging and might be enhanced by additional exploration through an assessment of its mechanisms and variables targeting differentiation per se. Future research exploring this link and mechanism may be key.

Differentiation and Love

Love, a core relational emotion, always emerges in an interpersonal or transpersonal field, and involves a series of relational skills. These skills include self-awareness, balanced emotional exchange, a dialectic dance between independence and interdependence, self- and other-needs assessment, and appropriate attachment. A growing number of theories, in fact, link love with self-awareness and positive interpersonal functioning, which, combined, may promote development and a healthy differentiation between self and other (Berscheid, 2010; Dadfar et al., 2021; Fredrickson, 2016). Fredrickson (2013), for example, defined love as emerging from "positivity resonance," when people experience moments of shared, interactive, synchronized, and reciprocal positive emotions on top of mutual care and concern. Such moments of interactive, mutual, reciprocal positivity resonance may bolster self-esteem, emotion regulation, interconnectedness, and the celebration of oneself in relationship with another person. After all, resonance is only possible when two join and, via resonance, become one. As the most spiritual and thriving of our profiles, our *High Love* profile endorsed clear beliefs in love, enhanced well-being and social support. Future research might specifically target whether a healthy, differentiated sense of self explains part of this link, and address how experiences of experienced love in childhood, adolescence, and other formative years are linked with a subsequent development of self and individuation.

Intersubjectivity & Relational Spirituality

Finally, Sandage and colleagues (2020) advanced *intersubjectivity,* defined as the recognition that fundamentally "we exist in relational webs" (p. 155), as the third pillar on which relational spirituality is established. Intersubjectivity is an "emergent relatedness," (Orange, 2009, p. 237, as cited in Sandage et al., 2020) a process of being in tune with ourselves and with others that is conducive to intimacy, authenticity, proper recognition of oneself in another, and of another in oneself. For the development of intersubjectivity, Sandage and colleagues (2020) outlined *interpersonal coordination* and *affective attunement* are key, and voiced that intersubjectivity is associated with a host of relational traits, skills, and benefits, including mutual engagement, emotional closeness, empathy, and enhanced self-awareness and interpersonal understanding. We believe mindfulness, self-compassion, and love play a pivotal role in the co-construction of intersubjective moments, and below emphasize why.

Intersubjectivity and Mindfulness

Present-moment awareness and non-judgmental acceptance may be foundational for creating moments of mutual recognition, mutual seeing, synchrony, and intersubjectivity. Growing literature, in fact, attests that mindful awareness is associated with increased frequency and intensity of flow experiences (Chen et al., 2018) which, interpersonally, are held as releasing common boundaries and constraints between people. Among other common ingredients for intersubjectivity, mindfulness also enhances emotion regulation (Farb et al., 2014), has been shown to facilitate active listening and increase (Jones et al., 2019), to reduce intrapersonal and interpersonal reactivity (Britton et al., 2012; Keesman et al., 2017; Steffen & Larson, 2015), all of which may be linked with increased intersubjective experiences. Mindfulness has also been linked with reduced rumination (Perestelo-Perez et al., 2017), a disruptive cognitive pattern that may have significantly impair interpersonal connection. By facilitating present-focused awareness and specifically by reducing judgment and experiential avoidance (McCluskey et al., 2022), mindfulness may induce such moments of intersubjective seeing, interpersonal perceiving, with their associated set of benefits. Though unable to categorically demonstrate this, our *High Mindfulness Profile* group displayed degrees of thriving and well-being whose mechanisms deserve further exploration. We encourage future research that examines whether increased interpersonal awareness, emotional engagement, and moments of intersubjectivity may elucidate this budding relationship and clarify the degree to which mindfulness might contribute to and enhance intersubjective awareness and experiences.

Intersubjectivity and Self-Compassion

By definition, self-compassion involves kindness towards oneself, a recognition of our common humanity, and disentangling our identity from self-judgment and moments of suffering (Neff, 2003). Being kind toward oneself has often been considered a marker for being kind toward other people (Neff & Pommier, 2013). Plus, self-compassion is linked with self-acceptance, which, by extension, may make people more likely to be authentic in interpersonal interactions. Self-kindness (and kindness toward others), self-acceptance (and acceptance toward others) and authenticity, we hold, may thus enhance intersubjective understanding and, by inference, connection (Zhang et al., 2020). Self-compassion has also been shown promote to emotion regulation (Finlay-Jones, 2017), which Sandage and colleagues (2020) and we recognize as foundational for intersubjective awareness and relating. Our *Self-Loving (Compassionate Self-Responding)* profile embodied several qualities that may be linked with an intersubjective perspective: increased perceived social, vitality, life satisfaction, mindfulness, reduced depression and anxiety. Although by no means exhaustive and yet incipient in nature, our study offers a start in this exploration of intersubjectivity and self-compassion. Future research addressing the mechanisms for these relationships, and investigating whether an intersubjective mediates this relationship is key.

Intersubjectivity and Love

To close, Sorokin's multidimensional experiences of love offer a vast framework for understanding the potential links between love and intersubjectivity. For example, *social love* highlights an intrinsic link between love and interpersonal relationships, while *psychological love* emphasizes feeling loved and embraced as one is by others; *ethical love* expands on the belief that treating others with love, care, and concern is the moral and ethical path for action and relating in the world (Levin & Kaplan, 2010). Each of these dimensions may be linked with the deepening of mutual, empathic, and meaning interpersonal connection, through which intersubjective experiences emerge and become salient. Our *High Love* profile, with an enhanced spiritual and interconnected worldview, with greater degrees of life satisfaction, gratitude, perceived social support, well-being, and lower negative emotion, depression, and anxiety may bear witness to intersubjectivity more prominently than other love profiles. Future research addressing the specific mechanisms for this hypothesized relationship is promising, and needed.

General Conclusions

Taken together and as a whole, our overall findings emphasize two key points. First, the various dimensions of mindfulness, self-compassion and of love do not look the same across individuals, and not all individuals love, are mindful, or experience self-compassion in the same way. Though often synthesized and summarized as homogeneous within the population at large, each of the multidimensional constructs analyzed in our research gave rise to distinct types and profiles, from nuanced *High Mindfulness* and *Nonjudgmental Aware*, to *Self-Berating* and *Self-Loving*. Second, the theoretical framework of *relationality* and, specifically, of *relational spirituality* (Sandage & Shults, 2022; Tomlinson et al., 2016), we maintain, may hold the synergy and explain interconnections among three sets of empirical findings. Our investigations, we believe, broaden the field of *relational spirituality* to encompass not only "the ways in which" we relate to the sacred (Sandage & Shults, 2007; Shults & Sandage, 2006), but, specifically, the ways in which we love, we are mindful, and how we treat ourselves. Rather than byproducts of an intrinsically spiritual framework for relational spirituality, love, self-compassion, and mindfulness may be the very foundation on which relational spirituality arises. We explored that attachment, differentiation, and intersubjectivity, as initially proposed by Sandage and colleagues (2020) may provide an important pathway for exploring the relation between our profiles of mindfulness, self-compassion, and love with well-being and flourishing. This is an important shift, because as our view of spirituality transcends religious contexts, the secular frameworks of love, mindfulness, and self-compassion may be key in safeguarding the protective benefits of cultivating an interconnected and sacred view of ourselves, of others, and of ultimate reality (Faigin & Pargament, 2011; Jim et al., 2015). By the virtue of the intrinsic relationality on which mindfulness, self-compassion, and love stand (Fredrickson, 2016; Lathren et al., 2021; Pratscher et al., 2019), we argue, many of the positive, wellness-related outcomes seen in these variables may emerge *precisely* from the inherently interpersonal qualities that these perceptual faculties, traits, attitudes, and skills provide. Thus, lifting these constructs out of a one-person psychology toward a relational, interpersonal frame, we suggest them as gateways toward larger views of awareness, perceptions of self and other, and as of reality, as a spiritual framework would hold (Delaney, 2005a).

Although our data do not promote unequivocal causal links between our view, our constructs, and the wellness and mental health benefits they appear associated with, we encourage future research to assess the distinct and specific contributions of a relational spiritual view with the mental health outcomes shown in our research. For us, just as psychiatry and clinical psychology gained from advancing a more relational framework (e.g., Aron, 1990), the scientific study of spirituality may be made richer by examining the quality, the nuances, and "the ways" (Shults and Sandage 2006, p. 161) in which individuals relate with the sacred in ourselves and in others. By addressing the potential "*what"* underscoring relational spirituality, we highlighted mindfulness, compassion and love as the potentially conducive to the benefits of sacred relating and to mental health benefits associated, in part, with spirituality. Though exploratory, our assertions build on prior empirical links mindfulness and *interpersonal* empathy (e.g., MacDonald & Price, 2017), reduced *social* anxiety (Goldin et al., 2017), and increased *relational* well-being and satisfaction (e.g., Barnes et al., 2007; McGill et al., 2016), and with increases in *spirituality* (Carmody et al., 2008b). Likewise, our research also expands on findings from neuroscience research suggesting that the same neural networks are implicated in self-compassion and in feeling empathy toward others (Longe et al., 2010), that self-compassion is associated with healthy concern for others (Gerber et al., 2015), perspective-taking, empathetic concern, altruism (Neff & Pommier, 2013), and spirituality (Bodok-Mulderij et al., 2023), all relational constructs. Growing evidence also indicates that self-compassion is associated with more relational well-being, more secure attachment, constructive repair behavior, and greater relationship satisfaction in families and couples (Lathren et al., 2021; Neff &

Beretvas, 2013). Finally, love may be the relational emotion par excellence, as love definitions, theories, and scales are quick to embrace interpersonal ingredients such as attachment, intimacy, and positivity resonance (Fredrickson, 2016; Hatfield, 1982), further suggesting love as associated with flourishing and well-being in intimate and close relationships (Graham, 2011), with higher quality of life (Oravecz et al., 2020), as well as with improved health outcomes (Esch & Stefano, 2005; Levin, 2001). All in all, like mindfulness, spirituality, and self-compassion, love may also be better or only understood and examined through a relational framework.

Limitations of the Present Research Studies

Like all other studies, ours were not immune from the limitations of cross-sectional and self-report-based assessments. Although informative, all three of our empirical studies include the basic limitations and biases of self-report and online recruitment (e.g., Brutus et al., 2013). Though we made a concerted effort from initial data collection and throughout analysis to review data integrity, validity, and reliability, we are aware of the strengths and limitations of online data collection (e.g., Aguinis et al., 2021). In addition, despite using a series of quality checks to ensure that participants responded attentively to our data, we recognize that online studies are inherently subject to biases, misreporting, inattention and through the implicit anonymity and minimal, impersonal contact that is part of an online survey engagement (e.g., Alvarez et al., 2019; Hauser & Schwarz, 2016). Given the cross-sectional nature of our studies, none of our results may speak for causal relations or for precedence among overall well-being, psychological adjustment and spirituality as these relate with the profiles of mindfulness, self-compassion, or love. As a result, we cannot ascertain that specific profiles of mindfulness, of self-compassion, or love *caused* or explained lower levels of psychopathology, higher well-being, or spirituality.

Likewise, we acknowledge that third variables beyond spirituality, such as improved mental health outcomes like lower depression, for instance, might serve as the backbone for the common trends we witnessed across *High Mindfulness, Self-Loving,* and *High Love* profiles as thriving. Future research might investigate the longevity and stability of these profiles over time via a longitudinal design such as latent transition analysis (e.g., Collins & Lanza, 2009). Future research might also add novel and specific relational spirituality assessments to evaluate our theoretical position. We also recognize that novel statistical approaches to compare distal outcomes following LPA exist beyond typical analysis of variance (i.e., ANOVA) have recently been developed (e.g., three-step approaches, including Maximum Likelihood and BMC; e.g., Collier & Leite, 2017) and are growing in popularity and in statistical robustness. Though our analytic software *tidyLPA* (Rosenberg et al., 2019a) did not yet contain the integrated framework for three-step procedures, and though several other published studies have recently used the same approach we used in our studies, we acknowledge the limitations of our method and encourage future research to continue to document differences that emerge across statistical procedures, and continue to standardize and converge on analytic frameworks and methods. Nonetheless, we also recognize the strengths of an ethnically, demographically, age diverse sample such as ours beyond those including only college students (e.g., Peterson & Merunka, 2014). Besides, we reinforce and feel reassured by the multiple similarities of our results with those found by several prior latent profile and variable-centered studies (e.g., Pearson et al., 2015; Phillips, 2021).

Recommendations for Future Research

Addressing the inherent limitations of our self-report, cross-sectional studies future research might add to the insights of our research through a variety of approaches. First, future research could integrate recent behavioral and state-based measures of mindfulness (Medvedev et al., 2017; Tanay & Bernstein, 2013), state self-compassion (Neff et al., 2021) and behavioral measures of love. We expect such data cross-validation to fill gaps left unaddressed by self-report data analyses. Second, given growing evidence of the neural and physiological underpinnings of mindfulness (Tang et al., 2015), of self-compassion (Stevens et al., 2018; Stevens & Woodruff, 2018), and of love (Cacioppo et al., 2012; de Boer et al., 2012), future research could also examine the ways in which people from specific profiles differ across basic neural and physiological patterns of activity. Third, because our research has focused on an adult U.S.-based sample, future studies could address cross-cultural contrasts with ours, given the unique ways in which latent profiles may emerged across different countries and cultures (e.g., Lam et al., 2018; Wu et al., 2020). Specifically, future research studies might also investigate whether these profiles are replicable among individuals from non-Western countries and cultures, and whether emerging patterns of differential associations with indices of well-being, spirituality, and psychopathology are comparable to those found in our U.S.-based sample. To our knowledge, our study on profiles of love using the Sorokin Multidimensional Inventory of Love Experience (SMILE; Levin & Kaplan, 2010) was the first of its kind. Thus, replication is warranted. Future clinical studies might also incorporate profile-based assessments of mindfulness, self-compassion, and love to verify the clinical utility of these categories for diagnosis and treatment, and incorporate specific measures of *attachment*, *differentiation* (of self) and *intersubjectivity* to explore ways in which our profiles fare across them.

References

Abu-Raiya, H., & Pargament, K. I. (2015). Religious coping among diverse religions: Commonalities and divergences. Psychology of Religion and Spirituality, 7(1), 24.

Aguinis, H., Villamor, I., & Ramani, R. S. (2021). MTurk research: Review and recommendations. Journal of Management, 47(4), 823–837.

Ai, A. L., & Hall, D. E. (2011). Divine Love and Deep Connections: A Long-Term Followup of Patients Surviving Cardiac Surgery. Journal of Aging Research, 2011, e841061. https://doi.org/10.4061/2011/841061

Ai, A. L., Peterson, C., Tice, T. N., Huang, B., Rodgers, W., & Bolling, S. F. (2007). The influence of prayer coping on mental health among cardiac surgery patients: The role of optimism and acute distress. Journal of Health Psychology, 12(4), 580–596.

Ai, A. L., Tice, T. N., Peterson, C., & Huang, B. (2005). Prayers, spiritual support, and positive attitudes in coping with the September 11 national crisis. Journal of Personality, 73(3), 763–792.

Ainsworth, M. S., & Bowlby, J. (1991). An ethological approach to personality development. American Psychologist, 46(4), 333.

Akaike, H. (1987). Factor analysis and AIC. In Selected papers of hirotugu akaike (pp. 371–386). Springer.

Alvarez, R. M., Atkeson, L. R., Levin, I., & Li, Y. (2019). Paying attention to inattentive survey respondents. Political Analysis, 27(2), 145–162.

Ano, G. G., & Vasconcelles, E. B. (2005). Religious coping and psychological adjustment to stress: A meta-analysis. Journal of Clinical Psychology, 61(4), 461–480. https://doi.org/10.1002/jclp.20049

Ao, X., Mo, L., Wei, Z., Yu, W., Zhou, F., & Zhang, D. (2020). Negative Bias During Early Attentional Engagement in Major Depressive Disorder as Examined Using a Two-Stage Model: High Sensitivity to Sad but Bluntness to Happy Cues. Frontiers in Human Neuroscience, 14. https://www.frontiersin.org/articles/10.3389/fnhum.2020.593010

Aron, A., Aron, E. N., & Smollan, D. (1992). Inclusion of other in the self scale and the structure of interpersonal closeness. Journal of Personality and Social Psychology, 63(4), 596.

Aron, A., Aron, E. N., Tudor, M., & Nelson, G. (1991). Close relationships as including other in the self. Journal of Personality and Social Psychology, 60(2), 241.

Aron, A., & Fraley, B. (1999). Relationship Closeness as Including Other in the Self: Cognitive Underpinnings and Measures. Social Cognition, 17(2), 140–160. https://doi.org/10.1521/soco.1999.17.2.140

Aron, A., & Westbay, L. (1996). Dimensions of the prototype of love. Journal of Personality and Social Psychology, 70(3), 535.

Aron, L. (1990). One person and two person psychologies and the method of psychoanalysis. Psychoanalytic Psychology, 7(4), 475.

Arroll, B., Goodyear-Smith, F., Crengle, S., Gunn, J., Kerse, N., Fishman, T., Falloon, K., & Hatcher, S. (2010a). Validation of PHQ-2 and PHQ-9 to screen for major depression in the primary care population. The Annals of Family Medicine, 8(4), 348–353.

Arroll, B., Goodyear-Smith, F., Crengle, S., Gunn, J., Kerse, N., Fishman, T., Falloon, K., & Hatcher, S. (2010b). Validation of PHQ-2 and PHQ-9 to screen for major depression in the primary care population. The Annals of Family Medicine, 8(4), 348–353.

Ashraf, R., & Merunka, D. (2017). The use and misuse of student samples: An empirical investigation of European marketing research. Journal of Consumer Behaviour, 16(4), 295–308. https://doi.org/10.1002/cb.1590

Atkins, P. W. B., & Styles, R. (2015). Mindfulness, identity and work: Mindfulness training creates a more flexible sense of self. In Mindfulness in organizations: Foundations, research, and applications (pp. 133–162). Cambridge University Press. https://doi.org/10.1017/CBO9781107587793.008

Baer, R. A., Smith, G. T., & Allen, K. B. (2004). Assessment of mindfulness by self-report the Kentucky inventory of mindfulness skills. Assessment, 11(3), 191–206.

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

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

Baer, R. A., Smith, G. T., Lykins, E., Button, D., Krietemeyer, J., Sauer, S., Walsh, E., Duggan, D., & Williams, J. M. G. (2008). Construct Validity of the Five Facet Mindfulness Questionnaire in Meditating and Nonmeditating Samples. Assessment, 15(3), 329–342. https://doi.org/10.1177/1073191107313003

Barnes, S., Brown, K. W., Krusemark, E., Campbell, W. K., & Rogge, R. D. (2007). The role of mindfulness in romantic relationship satisfaction and responses to relationship stress. Journal of Marital and Family Therapy, 33(4), 482–500. https://doi.org/10.1111/j.1752-0606.2007.00033.x

Beck, R. (2006). God as a Secure Base: Attachment to God and Theological Exploration. Journal of Psychology and Theology, 34(2), 125–132. https://doi.org/10.1177/009164710603400202

Beck, R., & McDonald, A. (2004). Attachment to God: The Attachment to God Inventory, Tests of Working Model Correspondence, and an Exploration of Faith Group Differences.

Journal of Psychology and Theology, 32(2), 92–103. https://doi.org/10.1177/009164710403200202

Becker, S., Al Zaid, K., & Al Faris, E. (2002). Screening for somatization and depression in Saudi Arabia: A validation study of the PHQ in primary care. The International Journal of Psychiatry in Medicine, 32(3), 271–283.

Berinsky, A. J., Huber, G. A., & Lenz, G. S. (2012). Evaluating online labor markets for experimental research: Amazon. com's Mechanical Turk. Political Analysis, 20(3), 351–368.

Berscheid, E. (2006). Searching for the meaning of "love." The New Psychology of Love, 171.

Berscheid, E. (2010). Love in the fourth dimension. Annual Review of Psychology, 61, 1–25.

Berscheid, E., & Walster, E. (1974). A little bit about love. Foundations of Interpersonal Attraction, 1, 356–381.

Berti, S., & Cigala, A. (2022). Mindfulness for Preschoolers: Effects on Prosocial Behavior, Self-Regulation and Perspective Taking. Early Education and Development, 33(1), 38–57. https://doi.org/10.1080/10409289.2020.1857990

Bjorck, J. P., & Thurman, J. W. (2007). Negative Life Events, Patterns of Positive and Negative Religious Coping, and Psychological Functioning. Journal for the Scientific Study of Religion, 46(2), 159–167. https://doi.org/10.1111/j.1468-5906.2007.00348.x

Blanck, P., Perleth, S., Heidenreich, T., Kröger, P., Ditzen, B., Bents, H., & Mander, J. (2018). Effects of mindfulness exercises as stand-alone intervention on symptoms of anxiety and depression: Systematic review and meta-analysis. Behaviour Research and Therapy, 102, 25–35.

Bodhi, B. (2013). What does mindfulness really mean? A canonical perspective. In Mindfulness (pp. 19–39). Routledge.

Bodok-Mulderij, I., Schaap-Jonker, H., Klaassen-Dekker, A., Boselie, J., & Jacobs, N. (2023). The relation between religion/spirituality and mental health is mediated by self-compassion: Evidence from two longitudinal studies in the Dutch-speaking general population. Psychology of Religion and Spirituality, 15(3), 407–417. https://doi.org/10.1037/rel0000501

Boellinghaus, I., Jones, F. W., & Hutton, J. (2014). The Role of Mindfulness and Loving-Kindness Meditation in Cultivating Self-Compassion and Other-Focused Concern in Health Care Professionals. Mindfulness, 5(2), 129–138. https://doi.org/10.1007/s12671-012-0158-6

Bolt, O. C., Jones, F. W., Rudaz, M., Ledermann, T., & Irons, C. (2019). Self-compassion and compassion towards one's partner mediate the negative association between insecure attachment and relationship quality. Journal of Relationships Research, 10, e20.

Bozdogan, H. (1987). Model selection and Akaike's information criterion (AIC): The general theory and its analytical extensions. Psychometrika, 52(3), 345–370.

Braam, A. W., & Koenig, H. G. (2019). Religion, spirituality and depression in prospective studies: A systematic review. Journal of Affective Disorders, 257, 428–438.

Bravo, A. J., Boothe, L. G., & Pearson, M. R. (2016a). Getting personal with mindfulness: A latent profile analysis of mindfulness and psychological outcomes. Mindfulness, 7(2), 420–432.

Bravo, A. J., Boothe, L. G., & Pearson, M. R. (2016b). Getting personal with mindfulness: A latent profile analysis of mindfulness and psychological outcomes. Mindfulness, 7(2), 420–432.

Bravo, A. J., Pearson, M. R., & Kelley, M. L. (2018). Mindfulness and psychological health outcomes: A latent profile analysis among military personnel and college students. Mindfulness, 9(1), 258–270.

Bravo, A. J., Pearson, M. R., Wilson, A. D., & Witkiewitz, K. (2018). When traits match states: Examining the associations between self-report trait and state mindfulness following a state mindfulness induction. Mindfulness, 9(1), 199–211.

Bray, B. C., Lanza, S. T., & Tan, X. (2015a). Eliminating bias in classify-analyze approaches for latent class analysis. Structural Equation Modeling: A Multidisciplinary Journal, 22(1), 1–11.

Bray, B. C., Lanza, S. T., & Tan, X. (2015b). Eliminating Bias in Classify-Analyze Approaches for Latent Class Analysis. Structural Equation Modeling: A Multidisciplinary Journal, 22(1), 1–11. https://doi.org/10.1080/10705511.2014.935265

Breines, J. G., & Chen, S. (2013). Activating the inner caregiver: The role of support-giving schemas in increasing state self-compassion. Journal of Experimental Social Psychology, 49(1), 58–64.

Britton, W. B., Shahar, B., Szepsenwol, O., & Jacobs, W. J. (2012). Mindfulness-based cognitive therapy improves emotional reactivity to social stress: Results from a randomized controlled trial. Behavior Therapy, 43(2), 365–380.

Brophy, K., Brähler, E., Hinz, A., Schmidt, S., & Körner, A. (2020). The role of self-compassion in the relationship between attachment, depression, and quality of life. Journal of Affective Disorders, 260, 45–52.

Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. Journal of Personality and Social Psychology, 84(4), 822.

Brutus, S., Aguinis, H., & Wassmer, U. (2013). Self-Reported Limitations and Future Directions in Scholarly Reports: Analysis and Recommendations. Journal of Management, 39(1), 48–75. https://doi.org/10.1177/0149206312455245

Bryant, A. N., Choi, J. Y., & Yasuno, M. (2003). Understanding the religious and spiritual dimensions of students' lives in the first year of college. Journal of College Student Development, 44(6), 723–745.

Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon's Mechanical Turk: A New Source of Inexpensive, Yet High-Quality, Data? Perspectives on Psychological Science, 6(1), 3–5. https://doi.org/10.1177/1745691610393980

Byerly, T. R. (2023). Agnostics who accept God's supposed love experience greater well-being. Mental Health, Religion & Culture, 26(1), 62–75. https://doi.org/10.1080/13674676.2023.2183187

Cacioppo, S., Bianchi-Demicheli, F., Hatfield, E., & Rapson, R. L. (2012). Social neuroscience of love. Clinical Neuropsychiatry, 9(1).

Calvete, E., Fernández-González, L., Echezarraga, A., & Orue, I. (2020). Dispositional mindfulness profiles in adolescents and their associations with psychological functioning and hypothalamic–pituitary–adrenal axis hormones. Journal of Youth and Adolescence, 49(7), 1406–1419.

Calvete, E., Fernandez-Gonzalez, L., Echezarraga, A., & Orue, I. (2020). Dispositional mindfulness profiles in adolescents and their associations with psychological functioning and hypothalamic–pituitary–adrenal axis hormones. Journal of Youth and Adolescence, 49(7), 1406–1419.

Cannon, M. F., & Weems, C. F. (2010). Cognitive biases in childhood anxiety disorders: Do interpretive and judgment biases distinguish anxious youth from their non-anxious peers? Journal of Anxiety Disorders, 24(7), 751–758.

Carlisi, C. O., & Robinson, O. J. (2018). The role of prefrontal–subcortical circuitry in negative bias in anxiety: Translational, developmental and treatment perspectives. Brain and Neuroscience Advances, 2, 2398212818774223. https://doi.org/10.1177/2398212818774223

Carmody, J., Reed, G., Kristeller, J., & Merriam, P. (2008a). Mindfulness, spirituality, and health-related symptoms. Journal of Psychosomatic Research, 64(4), 393–403. https://doi.org/10.1016/j.jpsychores.2007.06.015

Carmody, J., Reed, G., Kristeller, J., & Merriam, P. (2008b). Mindfulness, spirituality, and health-related symptoms. Journal of Psychosomatic Research, 64(4), 393–403.

Carpenter, J. K., Conroy, K., Gomez, A. F., Curren, L. C., & Hofmann, S. G. (2019). The relationship between trait mindfulness and affective symptoms: A meta-analysis of the Five Facet Mindfulness Questionnaire (FFMQ). Clinical Psychology Review, 74, 101785.

Chan, D. (2009). So why ask me? Are self-report data really that bad. Statistical and Methodological Myths and Urban Legends: Doctrine, Verity and Fable in the Organizational and Social Sciences, 309–336.

Chapman, A. L., Foley, L., Halliday, J., & Miller, L. (2021). Relational spirituality in K-12 education: A multi-case study. International Journal of Children's Spirituality, 26(3), 133–157.

Cheadle, A. C., & Dunkel Schetter, C. (2017). Untangling the mechanisms underlying the links between religiousness, spirituality, and better health. Social and Personality Psychology Compass, 11(2), e12299.

Cheang, R., Gillions, A., & Sparkes, E. (2019). Do Mindfulness-Based Interventions Increase Empathy and Compassion in Children and Adolescents: A Systematic Review. Journal of Child and Family Studies, 28(7), 1765–1779. https://doi.org/10.1007/s10826-019-01413-9

Chen, J.-H., Tsai, P.-H., Lin, Y.-C., Chen, C.-K., & Chen, C.-Y. (2018). Mindfulness training enhances flow state and mental health among baseball players in Taiwan. Psychology Research and Behavior Management, 12, 15–21. https://doi.org/10.2147/PRBM.S188734

Clogg, C. C. (1995). Latent Class Models. In G. Arminger, C. C. Clogg, & M. E. Sobel (Eds.), Handbook of Statistical Modeling for the Social and Behavioral Sciences (pp. 311–359). Springer US. https://doi.org/10.1007/978-1-4899-1292-3_6

Collier, Z. K., & Leite, W. L. (2017). A comparison of three-step approaches for auxiliary variables in latent class and latent profile analysis. Structural Equation Modeling: A Multidisciplinary Journal, 24(6), 819–830.

Collins, L. M., & Lanza, S. T. (2009). Latent class and latent transition analysis: With applications in the social, behavioral, and health sciences (Vol. 718). John Wiley & Sons.

Costantini, L., Pasquarella, C., Odone, A., Colucci, M. E., Costanza, A., Serafini, G., Aguglia, A., Murri, M. B., Brakoulias, V., & Amore, M. (2021). Screening for depression in primary care with Patient Health Questionnaire-9 (PHQ-9): A systematic review. Journal of Affective Disorders, 279, 473–483.

Dadfar, M., Gunn Iii, J. F., Lester, D., & Abdel-Khalek, A. M. (2021). Love of Life Model: Role of psychological well-being, depression, somatic health, and spiritual health. Mental Health, Religion & Culture, 24(2), 142–150. https://doi.org/10.1080/13674676.2020.1825360

D'Ambrosio, J. G., & Faul, A. C. (2013). Love: Through the Lens of Pitirim Sorokin. Analytic Teaching and Philosophical Praxis, 34(2), Article 2.

Danucalov, M. A., Kozasa, E. H., Afonso, R. F., Galduroz, J. C., & Leite, J. R. (2017). Yoga and compassion meditation program improve quality of life and self-compassion in family caregivers of Alzheimer's disease patients: A randomized controlled trial. Geriatrics & Gerontology International, 17(1), 85–91. https://doi.org/10.1111/ggi.12675

Daubenmier, J., Kristeller, J., Hecht, F. M., Maninger, N., Kuwata, M., Jhaveri, K., Lustig, R. H., Kemeny, M., Karan, L., & Epel, E. (2011). Mindfulness intervention for stress eating to reduce cortisol and abdominal fat among overweight and obese women: An exploratory randomized controlled study. Journal of Obesity, 2011.

Davis, E. B., Granqvist, P., & Sharp, C. (2021). Theistic relational spirituality: Development, dynamics, health, and transformation. Psychology of Religion and Spirituality, 13(4), 401.

Davis, E. B., Granqvist, P., & Sharp, C. (20180809). Theistic relational spirituality: Development, dynamics, health, and transformation. Psychology of Religion and Spirituality, 13(4), 401. https://doi.org/10.1037/rel0000219

de Boer, A., van Buel, E. M., & Ter Horst, G. J. (2012). Love is more than just a kiss: A neurobiological perspective on love and affection. Neuroscience, 201, 114–124. https://doi.org/10.1016/j.neuroscience.2011.11.017

de Bruin, E. I., Topper, M., Muskens, J. G., Bögels, S. M., & Kamphuis, J. H. (2012). Psychometric properties of the Five Facets Mindfulness Questionnaire (FFMQ) in a meditating and a non-meditating sample. Assessment, 19(2), 187–197.

De Souza Marcovski, F. C., & Miller, L. J. (2022). A latent profile analysis of the five facets of mindfulness in a US adult sample: Spiritual and psychological differences among four profiles. Current Psychology, 1–14.

Delaney, C. (2005a). The spirituality scale: Development and psychometric testing of a holistic instrument to assess the human spiritual dimension. Journal of Holistic Nursing, 23(2), 145–167.

Delaney, C. (2005b). The spirituality scale: Development and psychometric testing of a holistic instrument to assess the human spiritual dimension. Journal of Holistic Nursing, 23(2), 145–167.

Deng, Y.-Q., Liu, X.-H., Rodriguez, M. A., & Xia, C.-Y. (2011). The Five Facet Mindfulness Questionnaire: Psychometric Properties of the Chinese Version. Mindfulness, 2(2), 123–128. https://doi.org/10.1007/s12671-011-0050-9

Desrosiers, A., Kelley, B. S., & Miller, L. (2011). Parent and peer relationships and relational spirituality in adolescents and young adults. Psychology of Religion and Spirituality, 3(1), 39.

Desrosiers, A., & Miller, L. (2007). Relational spirituality and depression in adolescent girls. Journal of Clinical Psychology, 63(10), 1021–1037.

Diener, E. D., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. Journal of Personality Assessment, 49(1), 71–75.

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction With Life Scale. Journal of Personality Assessment, 49(1), 71–75. https://doi.org/10.1207/s15327752jpa4901_13

Diener, E., Tay, L., & Myers, D. G. (2011). The religion paradox: If religion makes people happy, why are so many dropping out? Journal of Personality and Social Psychology, 101(6), 1278.

Donald, J. N., Sahdra, B. K., Van Zanden, B., Duineveld, J. J., Atkins, P. W. B., Marshall, S. L., & Ciarrochi, J. (2019). Does your mindfulness benefit others? A systematic review and meta-analysis of the link between mindfulness and prosocial behaviour. British Journal of Psychology, 110(1), 101–125. https://doi.org/10.1111/bjop.12338

Dozois, D. J. A., Bieling, P. J., Evraire, L. E., Patelis-Siotis, I., Hoar, L., Chudzik, S., McCabe, K., & Westra, H. A. (2014). Changes in Core Beliefs (Early Maladaptive Schemas) and Self-Representation in Cognitive Therapy and Pharmacotherapy for Depression. International Journal of Cognitive Therapy, 7(3), 217–234. https://doi.org/10.1521/ijct.2014.7.3.217

Dunn, B. D., Stefanovitch, I., Buchan, K., Lawrence, A. D., & Dalgleish, T. (2009). A reduction in positive self-judgment bias is uniquely related to the anhedonic symptoms of depression. Behaviour Research and Therapy, 47(5), 374–381.

Emmons, R. A., McCullough, M. E., & Tsang, J.-A. (2003). The assessment of gratitude.

Emmons, R. A., McCullough, M. E., & Tsang, J.-A. (20030505). The assessment of gratitude. 327. https://doi.org/10.1037/10612-021

Esch, T., & Stefano, G. B. (2005). Love promotes health. Neuroendocrinology Letters, 26(3), 264–267.

Ewert, C., Vater, A., & Schröder-Abé, M. (2021). Self-compassion and coping: A meta-analysis. Mindfulness, 12(5), 1063–1077.

Exline, J. J., Pargament, K. I., Grubbs, J. B., & Yali, A. M. (2014). The Religious and Spiritual Struggles Scale: Development and initial validation. Psychology of Religion and Spirituality, 6(3), 208.

Exline, J. J., Van Tongeren, D. R., Bradley, D. F., Wilt, J. A., Stauner, N., Pargament, K. I., & DeWall, C. N. (2020). Pulling away from religion: Religious/spiritual struggles and religious disengagement among college students. Psychology of Religion and Spirituality, No Pagination Specified-No Pagination Specified. https://doi.org/10.1037/rel0000375

Faigin, C. A., & Pargament, K. I. (2011). Strengthened by the spirit: Religion, spirituality, and resilience through adulthood and aging. In Resilience in aging (pp. 163–180). Springer.

Farb, N. A., Anderson, A. K., Irving, J. A., & Segal, Z. V. (2014). Mindfulness interventions and emotion regulation. Handbook of Emotion Regulation, 2, 548–567.

Fehr, B. (1988). Prototype analysis of the concepts of love and commitment. Journal of Personality and Social Psychology, 55(4), 557.

Fehr, B., & Russell, J. A. (1991). The concept of love viewed from a prototype perspective. Journal of Personality and Social Psychology, 60(3), 425.

Feldman, G., Hayes, A., Kumar, S., Greeson, J., & Laurenceau, J.-P. (2007). Mindfulness and emotion regulation: The development and initial validation of the Cognitive and Affective Mindfulness Scale-Revised (CAMS-R). Journal of Psychopathology and Behavioral Assessment, 29(3), 177–190.

Ferrari, M., Hunt, C., Harrysunker, A., Abbott, M. J., Beath, A. P., & Einstein, D. A. (2019). Self-compassion interventions and psychosocial outcomes: A meta-analysis of RCTs. Mindfulness, 10(8), 1455–1473.

Finlay-jones, A. L. (2017). The relevance of self-compassion as an intervention target in mood and anxiety disorders: A narrative review based on an emotion regulation framework. Clinical Psychologist, 21(2), 90–103. https://doi.org/10.1111/cp.12131

Fonagy, P., & Luyten, P. (2018). Attachment, mentalizing, and the self. Handbook of Personality Disorders: Theory, Research, and Treatment, 123–140.

Ford, C. G., Wilson, J. M., Altman, N., Strough, J., & Shook, N. J. (2020). Profiles of Mindfulness across Adulthood. Mindfulness, 11(6), 1557–1569. https://doi.org/10.1007/s12671-020-01372-z

Fredrickson, B. (2013). Love 2.0: How our supreme emotion affects everything we feel, think, do, and become. Avery.

Fredrickson, B. L. (2016). Love: Positivity resonance as a fresh, evidence-based perspective on an age-old topic. Handbook of Emotions, 4, 847–858.

Fulton, C. L. (2018). Self-compassion as a mediator of mindfulness and compassion for others. Counseling and Values, 63(1), 45–56.

Galante, J., Bekkers, M., Mitchell, C., & Gallacher, J. (2016). Loving-Kindness Meditation Effects on Well-Being and Altruism: A Mixed-Methods Online RCT. Applied Psychology: Health and Well-Being, 8(3), 322–350. https://doi.org/10.1111/aphw.12074

Garssen, B., Visser, A., & Pool, G. (2021). Does spirituality or religion positively affect mental health? Meta-analysis of longitudinal studies. The International Journal for the Psychology of Religion, 31(1), 4–20.

Gerber, Z., Tolmacz, R., & Doron, Y. (2015). Self-compassion and forms of concern for others. Personality and Individual Differences, 86, 394–400.

Gilbert, P. (2009). Introducing compassion-focused therapy. Advances in Psychiatric Treatment, 15(3), 199–208.

Gilbert, P. (2014). The origins and nature of compassion focused therapy. British Journal of Clinical Psychology, 53(1), 6–41.

Goldin, P. R., Morrison, A. S., Jazaieri, H., Heimberg, R. G., & Gross, J. J. (2017). Trajectories of social anxiety, cognitive reappraisal, and mindfulness during an RCT of CBGT versus MBSR for social anxiety disorder. Behaviour Research and Therapy, 97, 1–13. https://doi.org/10.1016/j.brat.2017.06.001

Gollan, J. K., Hoxha, D., Hunnicutt-Ferguson, K., Norris, C. J., Rosebrock, L., Sankin, L., & Cacioppo, J. (2016). Twice the negativity bias and half the positivity offset: Evaluative responses to emotional information in depression. Journal of Behavior Therapy and Experimental Psychiatry, 52, 166–170. https://doi.org/10.1016/j.jbtep.2015.09.005

Goodman, L. A. (1974). The analysis of systems of qualitative variables when some of the variables are unobservable. Part IA modified latent structure approach. American Journal of Sociology, 79(5), 1179–1259.

Goodman, L. A. (2007). 1. On the assignment of individuals to latent classes. Sociological Methodology, 37(1), 1–22.

Graham, J. M. (2011). Measuring love in romantic relationships: A meta-analysis. Journal of Social and Personal Relationships, 28(6), 748–771. https://doi.org/10.1177/0265407510389126

Granqvist, P. (1998). Religiousness and perceived childhood attachment: On the question of compensation or correspondence. Journal for the Scientific Study of Religion, 350–367.

Greeson, J. M., Webber, D. M., Smoski, M. J., Brantley, J. G., Ekblad, A. G., Suarez, E. C., & Wolever, R. Q. (2011a). Changes in spirituality partly explain health-related quality of life outcomes after Mindfulness-Based Stress Reduction. Journal of Behavioral Medicine, 34(6), 508–518.

Greeson, J. M., Webber, D. M., Smoski, M. J., Brantley, J. G., Ekblad, A. G., Suarez, E. C., & Wolever, R. Q. (2011b). Changes in spirituality partly explain health-related quality of life outcomes after Mindfulness-Based Stress Reduction. Journal of Behavioral Medicine, 34(6), 508–518. https://doi.org/10.1007/s10865-011-9332-x

Grossman, P., Niemann, L., Schmidt, S., & Walach, H. (2004). Mindfulness-based stress reduction and health benefits: A meta-analysis. Journal of Psychosomatic Research, 57(1), 35–43.

Halifax, C. L. P., Roshi Joan. (2021). Religion and Spirituality in Adjusting to Bereavement: Grief as Burden, Grief as Gift. In Grief and Bereavement in Contemporary Society. Routledge.

Hall, T. W. (2021). Relational spirituality: A psychological-theological paradigm for transformation. InterVarsity Press.

Hatfield, E. (1982). Passionate love, companionate love, and intimacy. In Intimacy (pp. 267–292). Springer.

Hatfield, E. (1988). Passionate and companionate love. The Psychology of Love, 191–217.

Hauser, D. J., & Schwarz, N. (2016). Attentive Turkers: MTurk participants perform better on online attention checks than do subject pool participants. Behavior Research Methods, 48(1), 400–407. https://doi.org/10.3758/s13428-015-0578-z

Hayes-Skelton, S., & Graham, J. (2013). Decentering as a Common Link among Mindfulness, Cognitive Reappraisal, and Social Anxiety. Behavioural and Cognitive Psychotherapy, 41(3), 317–328. https://doi.org/10.1017/S1352465812000902

Hazan, C., & Shaver, P. (2017). Romantic love conceptualized as an attachment process. In Interpersonal Development (pp. 283–296). Routledge.

Hazan, C., & Shaver, P. R. (1990). Love and work: An attachment-theoretical perspective. Journal of Personality and Social Psychology, 59(2), 270.

Hegi, K. E., & Bergner, R. M. (2010). What is love? An empirically-based essentialist account. Journal of Social and Personal Relationships, 27(5), 620–636.

Hendrick, C., & Hendrick, S. (1986). A theory and method of love. Journal of Personality and Social Psychology, 50(2), 392.

Hendrick, C., & Hendrick, S. S. (1989). Research on love: Does it measure up? Journal of Personality and Social Psychology, 56(5), 784.

Hendrick, C., Hendrick, S. S., & Dicke, A. (1998). The Love Attitudes Scale: Short Form. Journal of Social and Personal Relationships, 15(2), 147–159. https://doi.org/10.1177/0265407598152001

Hill, P. C., & Pargament, K. I. (2003). Advances in the conceptualization and measurement of religion and spirituality: Implications for physical and mental health research. American Psychologist, 58, 64–74. https://doi.org/10.1037/0003-066X.58.1.64

Hofmann, S. G., Sawyer, A. T., Witt, A. A., & Oh, D. (2010). The effect of mindfulness-based therapy on anxiety and depression: A meta-analytic review. Journal of Consulting and Clinical Psychology, 78(2), 169–183. https://doi.org/10.1037/a0018555

Homan, K. J. (2014). A mediation model linking attachment to God, self-compassion, and mental health. Mental Health, Religion & Culture, 17(10), 977–989. https://doi.org/10.1080/13674676.2014.984163

Howard, M. C., & Hoffman, M. E. (2018). Variable-Centered, Person-Centered, and Person-Specific Approaches: Where Theory Meets the Method. Organizational Research Methods, 21(4), 846–876. https://doi.org/10.1177/1094428117744021

Hutcherson, C. A., Seppala, E. M., & Gross, J. J. (2008). Loving-kindness meditation increases social connectedness. Emotion, 8(5), 720.

Jacobson, E. H. K., Wilson, K. G., Solomon Kurz, A., & Kellum, K. K. (2018). Examining self-compassion in romantic relationships. Journal of Contextual Behavioral Science, 8, 69–73. https://doi.org/10.1016/j.jcbs.2018.04.003

James, W. (2003). The varieties of religious experience: A study in human nature. Routledge.

Jankowiak, W. R., & Fischer, E. F. (1992). A cross-cultural perspective on romantic love. Ethnology, 31(2), 149–155.

Jankowski, P. J., & Sandage, S. J. (2012). Spiritual dwelling and well-being: The mediating role of differentiation of self in a sample of distressed adults. Mental Health, Religion & Culture, 15(4), 417–434. https://doi.org/10.1080/13674676.2011.579592

Jazaieri, H., Jinpa, G. T., McGonigal, K., Rosenberg, E. L., Finkelstein, J., Simon-Thomas, E., Cullen, M., Doty, J. R., Gross, J. J., & Goldin, P. R. (2013). Enhancing compassion: A randomized controlled trial of a compassion cultivation training program. Journal of Happiness Studies, 14(4), 1113–1126.

Jha, A. P., Stanley, E. A., Kiyonaga, A., Wong, L., & Gelfand, L. (2010). Examining the protective effects of mindfulness training on working memory capacity and affective experience. Emotion, 10(1), 54.

Jim, H. S. L., Pustejovsky, J. E., Park, C. L., Danhauer, S. C., Sherman, A. C., Fitchett, G., Merluzzi, T. V., Munoz, A. R., George, L., Snyder, M. A., & Salsman, J. M. (2015). Religion, spirituality, and physical health in cancer patients: A meta-analysis. Cancer, 121(21), 3760–3768. https://doi.org/10.1002/cncr.29353

Johnson, E. A., & O'Brien, K. A. (2013). Self-Compassion Soothes the Savage EGO-Threat System: Effects on Negative Affect, Shame, Rumination, and Depressive Symptoms. Journal of Social and Clinical Psychology, 32(9), 939–963. https://doi.org/10.1521/jscp.2013.32.9.939

Jones, S. M., Bodie, G. D., & Hughes, S. D. (2019). The Impact of Mindfulness on Empathy, Active Listening, and Perceived Provisions of Emotional Support. Communication Research, 46(6), 838–865. https://doi.org/10.1177/0093650215626983

Kabat-Zinn, J. (2013a). Full catastrophe living, revised edition: How to cope with stress, pain and illness using mindfulness meditation. Hachette uK.

Kabat-Zinn, J. (2013b). Full catastrophe living, revised edition: How to cope with stress, pain and illness using mindfulness meditation. Hachette UK.

Kahneman, D., & Tversky, A. (1984). Choices, values, and frames. American Psychologist, 39(4), 341.

Keesman, M., Aarts, H., Häfner, M., & Papies, E. K. (2017). Mindfulness Reduces Reactivity to Food Cues: Underlying Mechanisms and Applications in Daily Life. Current Addiction Reports, 4(2), 151–157. https://doi.org/10.1007/s40429-017-0134-2

Kiken, L. G., & Shook, N. J. (2011). Looking Up: Mindfulness Increases Positive Judgments and Reduces Negativity Bias. Social Psychological and Personality Science, 2(4), 425–431. https://doi.org/10.1177/1948550610396585

Kim, J., & Hatfield, E. (2004). Love types and subjective well-being: A cross-cultural study. Social Behavior and Personality: An International Journal, 32(2), 173–182.

Kimmes, J. G., Durtschi, J. A., & Fincham, F. D. (2017). Perception in romantic relationships: A latent profile analysis of trait mindfulness in relation to attachment and attributions. Mindfulness, 8(5), 1328–1338.

Koenig, H. G. (2009). Research on religion, spirituality, and mental health: A review. Canadian Journal of Psychiatry, 54(5), 283–291.

Koenig, H. G. (2010). Spirituality and mental health. International Journal of Applied Psychoanalytic Studies, 7(2), 116–122.

Koenig, H. G. (2012). Religion, spirituality, and health: The research and clinical implications. International Scholarly Research Notices, 2012.

Koenig, H. G. (2015). Religion, spirituality, and health: A review and update. Advances in Mind-Body Medicine, 29(3), 19–26.

Koenig, H. G., Hill, T. D., Pirutinsky, S., & Rosmarin, D. H. (2021). Commentary on "Does Spirituality or Religion Positively Affect Mental Health?" The International Journal for the Psychology of Religion, 31(1), 27–44. https://doi.org/10.1080/10508619.2020.1766868

Koerner, N., Tallon, K., & Kusec, A. (2015). Maladaptive Core Beliefs and their Relation to Generalized Anxiety Disorder. Cognitive Behaviour Therapy, 44(6), 441–455. https://doi.org/10.1080/16506073.2015.1042989

Körner, A., Coroiu, A., Copeland, L., Gomez-Garibello, C., Albani, C., Zenger, M., & Brähler, E. (2015). The Role of Self-Compassion in Buffering Symptoms of Depression in the

General Population. PLOS ONE, 10(10), e0136598. https://doi.org/10.1371/journal.pone.0136598

Krause, N. (2003a). Religious meaning and subjective well-being in late life. The Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 58(3), S160–S170.

Krause, N. (2003b). Religious meaning and subjective well-being in late life. The Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 58(3), S160–S170.

Kroenke, K., Spitzer, R. L., & Williams, J. B. (2001a). The PHQ-9: Validity of a brief depression severity measure. Journal of General Internal Medicine, 16(9), 606–613.

Kroenke, K., Spitzer, R. L., & Williams, J. B. (2001b). The PHQ-9: Validity of a brief depression severity measure. Journal of General Internal Medicine, 16(9), 606–613.

Kuyken, W., Warren, F. C., Taylor, R. S., Whalley, B., Crane, C., Bondolfi, G., Hayes, R., Huijbers, M., Ma, H., Schweizer, S., Segal, Z., Speckens, A., Teasdale, J. D., Van Heeringen, K., Williams, M., Byford, S., Byng, R., & Dalgleish, T. (2016). Efficacy of Mindfulness-Based Cognitive Therapy in Prevention of Depressive Relapse: An Individual Patient Data Meta-analysis From Randomized Trials. JAMA Psychiatry, 73(6), 565–574. https://doi.org/10.1001/jamapsychiatry.2016.0076

Labelle, L. E., Lawlor-Savage, L., Campbell, T. S., Faris, P., & Carlson, L. E. (2015). Does self-report mindfulness mediate the effect of Mindfulness-Based Stress Reduction (MBSR) on spirituality and posttraumatic growth in cancer patients? The Journal of Positive Psychology, 10(2), 153–166.

Lam, K. F., Lim, H. A., Kua, E. H., Griva, K., & Mahendran, R. (2018a). Mindfulness and cancer patients’ emotional states: A latent profile analysis among newly diagnosed cancer patients. Mindfulness, 9(2), 521–533.

Lam, K. F., Lim, H. A., Kua, E. H., Griva, K., & Mahendran, R. (2018b). Mindfulness and cancer patients’ emotional states: A latent profile analysis among newly diagnosed cancer patients. Mindfulness, 9(2), 521–533.

Landers, R. N., & Behrend, T. S. (2015). An Inconvenient Truth: Arbitrary Distinctions Between Organizational, Mechanical Turk, and Other Convenience Samples. Industrial and Organizational Psychology, 8(2), 142–164. https://doi.org/10.1017/iop.2015.13

Lanza, S. T., Flaherty, B. P., & Collins, L. M. (2003). Latent class and latent transition analysis. Handbook of Psychology, 663–685.

Lathren, C. R., Rao, S. S., Park, J., & Bluth, K. (2021). Self-compassion and current close interpersonal relationships: A scoping literature review. Mindfulness, 12(5), 1078–1093.

Lee, E. E., Govind, T., Ramsey, M., Wu, T. C., Daly, R., Liu, J., Tu, X. M., Paulus, M. P., Thomas, M. L., & Jeste, D. V. (2021). Compassion toward others and self-compassion predict mental and physical well-being: A 5-year longitudinal study of 1090 community-dwelling adults across the lifespan. Translational Psychiatry, 11(1), Article 1. https://doi.org/10.1038/s41398-021-01491-8

Lee, J. A. (1977). A Typology of Styles of Loving. Personality and Social Psychology Bulletin, 3(2), 173–182. https://doi.org/10.1177/014616727700300204

Lee, M. T., Poloma, M. M., & Post, S. G. (2012). The Heart of Religion: Spiritual Empowerment, Benevolence, and the Experience of God's Love. https://academic.oup.com/book/35353?sid=oup:oxfordacademic&genre=book&aulast=Lee&aufirst=Matthew+T.&title=The+Heart+of+Religion%3A+Spiritual+Empowerment%2C+Benevolence%2C+and+the+Experience+of+God%27s+Love&date=2012-12-12

Leman, J., Hunter, W., Fergus, T., & Rowatt, W. (2018). Secure Attachment to God Uniquely Linked to Psychological Health in a National, Random Sample of American Adults. The International Journal for the Psychology of Religion, 28(3), 162–173. https://doi.org/10.1080/10508619.2018.1477401

Levin, J. (2000). A Prolegomenon to an Epidemiology of Love: Theory, Measurement, and Health Outcomes. Journal of Social and Clinical Psychology, 19(1), 117–136. https://doi.org/10.1521/jscp.2000.19.1.117

Levin, J. (2001). God, love, and health: Findings from a clinical study. Review of Religious Research, 277–293.

Levin, J. (2023). The epidemiology of love: Historical perspectives and implications for population-health research. The Journal of Positive Psychology, 18(1), 34–43. https://doi.org/10.1080/17439760.2022.2053876

Levin, J., & Kaplan, B. H. (2010). The Sorokin multidimensional inventory of love experience (SMILE): Development, validation, and religious determinants. Review of Religious Research, 380–401.

Lewis Hall, M. E., & Hill, P. (2019). Meaning-making, suffering, and religion: A worldview conception. Mental Health, Religion & Culture, 22(5), 467–479. https://doi.org/10.1080/13674676.2019.1625037

Lilja, J. L., Lundh, L.-G., Josefsson, T., & Falkenström, F. (2013). Observing as an essential facet of mindfulness: A comparison of FFMQ patterns in meditating and non-meditating individuals. Mindfulness, 4(3), 203–212.

Liss, M., Erchull, M., Hirschberg, D., Pitts, A., & Ambuel, D. (2023). Effects of a Meditation and Contemplative Practice Course on College Students' Mindfulness, Self-Compassion, and Mental Health. Journal of Contemplative Inquiry, 7(1). https://digscholarship.unco.edu/joci/vol7/iss1/10

Longe, O., Maratos, F. A., Gilbert, P., Evans, G., Volker, F., Rockliff, H., & Rippon, G. (2010). Having a word with yourself: Neural correlates of self-criticism and self-reassurance. NeuroImage, 49(2), 1849–1856.

López, A., Sanderman, R., Smink, A., Zhang, Y., Van Sonderen, E., Ranchor, A., & Schroevers, M. J. (2015). A reconsideration of the Self-Compassion Scale's total score: Self-compassion versus self-criticism. PloS One, 10(7), e0132940.

Lotrakul, M., Sumrithe, S., & Saipanish, R. (2008a). Reliability and validity of the Thai version of the PHQ-9. BMC Psychiatry, 8(1), 46.

Lotrakul, M., Sumrithe, S., & Saipanish, R. (2008b). Reliability and validity of the Thai version of the PHQ-9. BMC Psychiatry, 8(1), 1–7.

Lubke, G., & Neale, M. C. (2006). Distinguishing Between Latent Classes and Continuous Factors: Resolution by Maximum Likelihood? Multivariate Behavioral Research, 41(4), 499–532. https://doi.org/10.1207/s15327906mbr4104_4

MacBeth, A., & Gumley, A. (2012). Exploring compassion: A meta-analysis of the association between self-compassion and psychopathology. Clinical Psychology Review, 32(6), 545–552.

MacDonald, H. Z., & Price, J. L. (2017). Emotional understanding: Examining alexithymia as a mediator of the relationship between mindfulness and empathy. Mindfulness, 8(6), 1644–1652.

Mahlo, L., & Windsor, T. D. (2021). Older and more mindful? Age differences in mindfulness components and well-being. Aging & Mental Health, 25(7), 1320–1331. https://doi.org/10.1080/13607863.2020.1734915

Mandal, S. P., Arya, Y. K., & Pandey, R. (2016). Validation of the factor structure of the five facet mindfulness questionnaire. Indian Journal of Health and Wellbeing, 7(1), 61.

Manning, R. P., Dickson, J. M., Palmier-Claus, J., Cunliffe, A., & Taylor, P. J. (2017). A systematic review of adult attachment and social anxiety. Journal of Affective Disorders, 211, 44–59.

Mason, W., & Suri, S. (2012). Conducting behavioral research on Amazon's Mechanical Turk. Behavior Research Methods, 44(1), 1–23. https://doi.org/10.3758/s13428-011-0124-6

Masuda, A. (2014). Mindfulness and acceptance in multicultural competency: A contextual approach to sociocultural diversity in theory and practice. New Harbinger Publications. https://books.google.com/books?hl=en&lr=&id=hI30AgAAQBAJ&oi=fnd&pg=PT8&dq=Mindfulness+Training+and+Cultural+Diversity:+Exploring+the+Impact+of+Mindfulness+on+Multicultural+Counseling+Competence&ots=sqIAs_u-cx&sig=cKUjKEuMCSiDhnLkS57L3SL8oJ8

Maurits Kwee, G. T. (2015). Pristine Mindfulness: Heartfulness and Beyond. In E. Shonin, W. Van Gordon, & N. N. Singh (Eds.), Buddhist Foundations of Mindfulness (pp. 339–362). Springer International Publishing. https://doi.org/10.1007/978-3-319-18591-0_16

McClintock, C. H., Anderson, M., Svob, C., Wickramaratne, P., Neugebauer, R., Miller, L., & Weissman, M. M. (2019). Multidimensional understanding of religiosity/spirituality: Relationship to major depression and familial risk. Psychological Medicine, 49(14), 2379–2388.

McClintock, C. H., Lau, E., & Miller, L. (2016). Phenotypic dimensions of spirituality: Implications for mental health in China, India, and the United States. Frontiers in Psychology, 7, 1600.

McCluskey, D. L., Haliwa, I., Wilson, J. M., Keeley, J. W., & Shook, N. J. (2022). Experiential avoidance mediates the relation between mindfulness and anxiety. Current Psychology, 41(6), 3947–3957. https://doi.org/10.1007/s12144-020-00929-4

McCullough, M. E., Emmons, R. A., & Tsang, J.-A. (2002). The grateful disposition: A conceptual and empirical topography. Journal of Personality and Social Psychology, 82(1), 112.

McDonald, A., Beck, R., Allison, S., & Norswortby, L. (2005). Attachment to God and parents: Testing the correspondence vs. compensation hypotheses. Journal of Psychology & Christianity, 24(1). https://www.callisto-science.org/conference/Papers/Attachment%20to%20God%20and%20Parents-Testing%20the%20Correspondence%20vs.%20Compensation%20Hypotheses%20(McDonald,%20Angie).pdf

McGill, J., Adler-Baeder, F., & Rodriguez, P. (2016). Mindfully in Love: A Meta-Analysis of the Association Between Mindfulness and Relationship Satisfaction. Journal of Human Sciences and Extension, 4(1). https://doi.org/10.54718/DDCA4089

Medvedev, O. N., Krägeloh, C. U., Narayanan, A., & Siegert, R. J. (2017). Measuring mindfulness: Applying generalizability theory to distinguish between state and trait. Mindfulness, 8(4), 1036–1046.

Mesmer-Magnus, J., Manapragada, A., Viswesvaran, C., & Allen, J. W. (2017). Trait mindfulness at work: A meta-analysis of the personal and professional correlates of trait mindfulness. Human Performance, 30(2–3), 79–98. https://doi.org/10.1080/08959285.2017.1307842

Mikulincer, M., & Shaver, P. R. (2019). Attachment orientations and emotion regulation. Current Opinion in Psychology, 25, 6–10. https://doi.org/10.1016/j.copsyc.2018.02.006

Miller, L., Bansal, R., Wickramaratne, P., Hao, X., Tenke, C. E., Weissman, M. M., & Peterson, B. S. (2014a). Neuroanatomical Correlates of Religiosity and Spirituality: A Study in Adults at High and Low Familial Risk for Depression. JAMA Psychiatry, 71(2), 128–135. https://doi.org/10.1001/jamapsychiatry.2013.3067

Miller, L., Bansal, R., Wickramaratne, P., Hao, X., Tenke, C. E., Weissman, M. M., & Peterson, B. S. (2014b). Neuroanatomical correlates of religiosity and spirituality: A study in adults at high and low familial risk for depression. JAMA Psychiatry, 71(2), 128–135.

Morin, A. J., Gagne, M., & Bujacz, A. (2016). Feature topic: Person-centered methodologies in the organizational sciences. Organizational Research Methods, 8–9.

Morone, N. E., Greco, C. M., & Weiner, D. K. (2008). Mindfulness meditation for the treatment of chronic low back pain in older adults: A randomized controlled pilot study. PAIN, 134(3), 310–319. https://doi.org/10.1016/j.pain.2007.04.038

Muris, P., & Otgaar, H. (2022). Deconstructing Self-Compassion: How the Continued Use of the Total Score of the Self-Compassion Scale Hinders Studying a Protective Construct Within the Context of Psychopathology and Stress. Mindfulness. https://doi.org/10.1007/s12671-022-01898-4

Muris, P., Otgaar, H., López, A., Kurtic, I., & van de Laar, I. (2021). The (non) protective role of self-compassion in internalizing symptoms: Two empirical studies in adolescents demonstrating unwanted effects of using the Self-Compassion Scale total score. Mindfulness, 12(1), 240–252.

Muris, P., Otgaar, H., & Petrocchi, N. (2016). Protection as the mirror image of psychopathology: Further critical notes on the self-compassion scale. Mindfulness, 7(3), 787–790.

Muris, P., & Petrocchi, N. (2017). Protection or vulnerability? A meta-analysis of the relations between the positive and negative components of self-compassion and psychopathology. Clinical Psychology & Psychotherapy, 24(2), 373–383.

Nagin, D. S. (2005). Posterior group-membership probabilities. Group-Based Modeling of Development. Cambridge, MA: Harward University Press, 78–92.

Neff, J. A. (2006). Exploring the dimensionality of “religiosity” and “spirituality” in the Fetzer multidimensional measure. Journal for the Scientific Study of Religion, 45(3), 449–459.

Neff, K. (2003). Self-compassion: An alternative conceptualization of a healthy attitude toward oneself. Self and Identity, 2(2), 85–101.

Neff, K. D. (2003). The development and validation of a scale to measure self-compassion. Self and Identity, 2(3), 223–250.

NEFF, K. D. (2003). The Development and Validation of a Scale to Measure Self-Compassion. Self and Identity, 2(3), 223–250. https://doi.org/10.1080/15298860309027

Neff, K. D. (2016). The self-compassion scale is a valid and theoretically coherent measure of self-compassion. Mindfulness, 7(1), 264–274.

Neff, K. D. (2019). Setting the record straight about the Self-Compassion Scale. Mindfulness, 10(1), 200–202.

Neff, K. D. (2022). The Differential Effects Fallacy in the Study of Self-compassion: Misunderstanding the Nature of Bipolar Continuums. Mindfulness, 13(3), 572–576. https://doi.org/10.1007/s12671-022-01832-8

Neff, K. D. (2023). Self-compassion: Theory, method, research, and intervention. Annual Review of Psychology, 74, 193–218.

Neff, K. D., & Beretvas, S. N. (2013). The role of self-compassion in romantic relationships. Self and Identity, 12(1), 78–98.

Neff, K. D., & Germer, C. K. (2013). A pilot study and randomized controlled trial of the mindful self-compassion program. Journal of Clinical Psychology, 69(1), 28–44.

Neff, K. D., Long, P., Knox, M. C., Davidson, O., Kuchar, A., Costigan, A., Williamson, Z., Rohleder, N., Tóth-Király, I., & Breines, J. G. (2018). The forest and the trees: Examining the association of self-compassion and its positive and negative components with psychological functioning. Self and Identity, 17(6), 627–645.

Neff, K. D., & McGehee, P. (2010). Self-compassion and Psychological Resilience Among Adolescents and Young Adults. Self and Identity, 9(3), 225–240. https://doi.org/10.1080/15298860902979307

Neff, K. D., & Pommier, E. (2013). The relationship between self-compassion and other-focused concern among college undergraduates, community adults, and practicing meditators. Self and Identity, 12(2), 160–176.

Neff, K. D., Tóth-Király, I., Knox, M. C., Kuchar, A., & Davidson, O. (2021). The development and validation of the state self-compassion scale (long-and short form). Mindfulness, 12(1), 121–140.

Neff, K., & Germer, C. (2022). The role of self-compassion in psychotherapy. World Psychiatry, 21(1), 58.

Newberg, A. (2014). The neuroscientific study of spiritual practices. Frontiers in Psychology, 5. https://www.frontiersin.org/articles/10.3389/fpsyg.2014.00215

Nylund, K. L., Asparouhov, T., & Muthén, B. O. (2007). Deciding on the number of classes in latent class analysis and growth mixture modeling: A Monte Carlo simulation study. Structural Equation Modeling, 14, 535–569.

Oman, D., & Thoresen, C. E. (2005). Do religion and spirituality influence health. Handbook of the Psychology of Religion and Spirituality, 435–459.

Orange, D. M. (2009). Intersubjective Systems Theory: A Fallibilist’s Journey. Annals of the New York Academy of Sciences, 1159(1), 237–248. https://doi.org/10.1111/j.1749-6632.2008.04347.x

Oravecz, Z., Dirsmith, J., Heshmati, S., Vandekerckhove, J., & Brick, T. R. (2020). Psychological well-being and personality traits are associated with experiencing love in everyday life. Personality and Individual Differences, 153, 109620.

Ortner, C. N., Kilner, S. J., & Zelazo, P. D. (2007). Mindfulness meditation and reduced emotional interference on a cognitive task. Motivation and Emotion, 31, 271–283.

Osmo, F., Duran, V., Wenzel, A., Oliveira, I. R. de, Nepomuceno, S., Madeira, M., & Menezes, I. (2018). The Negative Core Beliefs Inventory: Development and Psychometric Properties. Journal of Cognitive Psychotherapy, 32(1), 67–84. https://doi.org/10.1891/0889-8391.32.1.67

Paolacci, G., & Chandler, J. (2014). Inside the Turk: Understanding Mechanical Turk as a Participant Pool. Current Directions in Psychological Science, 23(3), 184–188. https://doi.org/10.1177/0963721414531598

Pastor, D. A., Barron, K. E., Miller, B. J., & Davis, S. L. (2007a). A latent profile analysis of college students' achievement goal orientation. Contemporary Educational Psychology, 32(1), 8–47. https://doi.org/10.1016/j.cedpsych.2006.10.003

Pastor, D. A., Barron, K. E., Miller, B. J., & Davis, S. L. (2007b). A latent profile analysis of college students' achievement goal orientation. Contemporary Educational Psychology, 32(1), 8–47.

Patel, N. K., Nivethitha, L., & Mooventhan, A. (2018). Effect of a Yoga Based Meditation Technique on Emotional Regulation, Self-compassion and Mindfulness in College Students. EXPLORE, 14(6), 443–447. https://doi.org/10.1016/j.explore.2018.06.008

Pearson, M. R., Lawless, A. K., Brown, D. B., & Bravo, A. J. (2015a). Mindfulness and emotional outcomes: Identifying subgroups of college students using latent profile analysis. Personality and Individual Differences, 76, 33–38.

Pearson, M. R., Lawless, A. K., Brown, D. B., & Bravo, A. J. (2015b). Mindfulness and emotional outcomes: Identifying subgroups of college students using latent profile analysis. Personality and Individual Differences, 76, 33–38. https://doi.org/10.1016/j.paid.2014.11.009

Peng, K., Spencer-Rodgers, J., & Nian, Z. (2006). Naïve dialecticism and the Tao of Chinese thought. In Indigenous and cultural psychology: Understanding people in context (pp. 247–262). Springer.

Perestelo-Perez, L., Barraca, J., Peñate, W., Rivero-Santana, A., & Alvarez-Perez, Y. (2017). Mindfulness-based interventions for the treatment of depressive rumination: Systematic review and meta-analysis. International Journal of Clinical and Health Psychology, 17(3), 282–295. https://doi.org/10.1016/j.ijchp.2017.07.004

Peterson, R. A., & Merunka, D. R. (2014). Convenience samples of college students and research reproducibility. Journal of Business Research, 67(5), 1035–1041. https://doi.org/10.1016/j.jbusres.2013.08.010

Phillips, W. J. (2021). Self-compassion mindsets: The components of the self-compassion scale operate as a balanced system within individuals. Current Psychology, 40(10), 5040–5053. https://doi.org/10.1007/s12144-019-00452-1

Phillips, W. J., & Hine, D. W. (2021). Self-compassion, physical health, and health behaviour: A meta-analysis. Health Psychology Review, 15(1), 113–139.

Post, S. G., Underwood, L. G., Schloss, J. P., & Hurlbut, W. B. (2002). Altruism and altruistic love: Science, philosophy, and religion in dialogue. Oxford University Press.

Poulin, M. J., & Holman, E. A. (2013). Helping hands, healthy body? Oxytocin receptor gene and prosocial behavior interact to buffer the association between stress and physical health. Hormones and Behavior, 63(3), 510–517.

Pratscher, S. D., Wood, P. K., King, L. A., & Bettencourt, B. (2019). Interpersonal mindfulness: Scale development and initial construct validation. Mindfulness, 10(6), 1044–1061.

Quinn-Nilas, C. (2020). Self-Reported Trait Mindfulness and Couples' Relationship Satisfaction: A Meta-Analysis. Mindfulness, 11(4), 835–848. https://doi.org/10.1007/s12671-020-01303-y

Raes, F., Hermans, D., & Williams, J. M. G. (2006). Negative Bias in the Perception of Others' Facial Emotional Expressions in Major Depression: The Role of Depressive Rumination. The Journal of Nervous and Mental Disease, 194(10), 796. https://doi.org/10.1097/01.nmd.0000240187.80270.bb

Raes, F., Pommier, E., Neff, K. D., & Van Gucht, D. (2011a). Construction and factorial validation of a short form of the self-compassion scale. Clinical Psychology & Psychotherapy, 18(3), 250–255.

Raes, F., Pommier, E., Neff, K. D., & Van Gucht, D. (2011b). Construction and factorial validation of a short form of the self-compassion scale. Clinical Psychology & Psychotherapy, 18(3), 250–255.

Rim, J. I., Ojeda, J. C., Svob, C., Kayser, J., Drews, E., Kim, Y., Tenke, C. E., Skipper, J., & Weissman, M. M. (2019). Current Understanding of Religion, Spirituality, and Their Neurobiological Correlates. Harvard Review of Psychiatry, 27(5), 303–316. https://doi.org/10.1097/HRP.0000000000000232

Rosch, E. H. (1973). Natural categories. Cognitive Psychology, 4(3), 328–350.

Rosenberg, J., Beymer, P., Anderson, D., van Lissa, C. j., & Schmidt, J. (2018). tidyLPA: An R Package to Easily Carry Out Latent Profile Analysis (LPA) Using Open-Source or

Commercial Software. Journal of Open Source Software, 3(30), 978. https://doi.org/10.21105/joss.00978

Rosenberg, J. M., Beymer, P. N., Anderson, D. J., Van Lissa, C. J., & Schmidt, J. A. (2019a). tidyLPA: An R package to easily carry out latent profile analysis (LPA) using open-source or commercial software. Journal of Open Source Software, 3(30), 978.

Rosenberg, J. M., Beymer, P. N., Anderson, D. J., Van Lissa, C. J., & Schmidt, J. A. (2019b). tidyLPA: An R package to easily carry out latent profile analysis (LPA) using open-source or commercial software. Journal of Open Source Software, 3(30), 978.

Rosmarin, D. H., & Koenig, H. G. (2020). Handbook of spirituality, religion, and mental health. Academic Press.

Rubin, Z. (1970). Measurement of romantic love. Journal of Personality and Social Psychology, 16(2), 265.

Rudkin, E., Medvedev, O. N., & Siegert, R. J. (2018). The Five-Facet Mindfulness Questionnaire: Why the Observing Subscale Does Not Predict Psychological Symptoms. Mindfulness, 9(1), 230–242. https://doi.org/10.1007/s12671-017-0766-2

Ryan, R. M., & Frederick, C. (1997a). On energy, personality, and health: Subjective vitality as a dynamic reflection of well-being. Journal of Personality, 65(3), 529–565.

Ryan, R. M., & Frederick, C. (1997b). On energy, personality, and health: Subjective vitality as a dynamic reflection of well-being. Journal of Personality, 65(3), 529–565.

Sahdra, B. K., Ciarrochi, J., Parker, P. D., Basarkod, G., Bradshaw, E. L., & Baer, R. (2017a). Are people mindful in different ways? Disentangling the quantity and quality of mindfulness in latent profiles and exploring their links to mental health and life effectiveness. European Journal of Personality, 31(4), 347–365.

Sahdra, B. K., Ciarrochi, J., Parker, P. D., Basarkod, G., Bradshaw, E. L., & Baer, R. (2017b). Are People Mindful in Different Ways? Disentangling the Quantity and Quality of Mindfulness in Latent Profiles and Exploring their Links to Mental Health and Life Effectiveness. European Journal of Personality, 31(4), 347–365. https://doi.org/10.1002/per.2108

Sahdra, B. K., MacLean, K. A., Ferrer, E., Shaver, P. R., Rosenberg, E. L., Jacobs, T. L., Zanesco, A. P., King, B. G., Aichele, S. R., & Bridwell, D. A. (2011). Enhanced response inhibition during intensive meditation training predicts improvements in self-reported adaptive socioemotional functioning. Emotion, 11(2), 299.

Salsman, J. M., Brown, T. L., Brechting, E. H., & Carlson, C. R. (2005). The link between religion and spirituality and psychological adjustment: The mediating role of optimism and social support. Personality and Social Psychology Bulletin, 31(4), 522–535.

Sandage, S. J., Rupert, D., Stavros, G., & Devor, N. G. (2020). Relational spirituality in psychotherapy: Healing suffering and promoting growth. American Psychological Association.

Sandage, S. J., & Shults, F. L. (2007). Relational Spirituality and Transformation: A Relational Integration Model. Journal of Psychology & Christianity, 26(3).

Sandage, S., & Shults, F. L. (2022). Relational spirituality and transformation: A relational integration model. Journal of Psychology and Christianity, 261–269.

Sauer, S., & Baer, R. A. (2010). Mindfulness and decentering as mechanisms of change in mindfulness-and acceptance-based interventions. Assessing Mindfulness and Acceptance Processes in Clients: Illuminating the Theory and Practice of Change, 25–50.

Scheele, D., Mihov, Y., Schwederski, O., Maier, W., & Hurlemann, R. (2013). A negative emotional and economic judgment bias in major depression. European Archives of Psychiatry and Clinical Neuroscience, 263(8), 675–683. https://doi.org/10.1007/s00406-013-0392-5

Schwarz, G. (1978a). Estimating the dimension of a model. The Annals of Statistics, 6(2), 461–464.

Schwarz, G. (1978b). Estimating the dimension of a model. The Annals of Statistics, 461–464.

Scrucca, L., Fop, M., Murphy, T. B., & Raftery, A. E. (2016a). mclust 5: Clustering, classification and density estimation using Gaussian finite mixture models. The R Journal, 8(1), 289.

Scrucca, L., Fop, M., Murphy, T. B., & Raftery, A. E. (2016b). mclust 5: Clustering, classification and density estimation using Gaussian finite mixture models. The R Journal, 8(1), 289.

Shapiro, S. L., Carlson, L. E., Astin, J. A., & Freedman, B. (2006). Mechanisms of mindfulness. Journal of Clinical Psychology, 62(3), 373–386. https://doi.org/10.1002/jclp.20237

Shapiro, S. L., Oman, D., Thoresen, C. E., Plante, T. G., & Flinders, T. (2008). Cultivating mindfulness: Effects on well-being. Journal of Clinical Psychology, 64(7), 840–862.

Shaver, P. R., Morgan, H. J., & Wu, S. (1996). Is love a “basic” emotion? Personal Relationships, 3(1), 81–96. https://doi.org/10.1111/j.1475-6811.1996.tb00105.x

Shaver, P., Schwartz, J., Kirson, D., & O’connor, C. (1987). Emotion knowledge: Further exploration of a prototype approach. Journal of Personality and Social Psychology, 52(6), 1061.

Shih, H.-C., Kuo, M.-E., Wu, C. W., Chao, Y.-P., Huang, H.-W., & Huang, C.-M. (2022). The neurobiological basis of Love: A meta-analysis of human functional neuroimaging studies of maternal and passionate love. Brain Sciences, 12(7), 830.

Shults, F. L., & Sandage, S. J. (2006). Transforming Spirituality: Integrating Theology and Psychology. Baker Academic.

Sorokin, P. A. (1950). Altruistic love: A study of American" good neighbors" and Christian saints (Vol. 76). Beacon Press.

Sorokin, P. A. (1954). Forms and techniques of altruistic and spiritual growth: A symposium. Beacon Press.

Sorokin, P. A. (2015). Ways & power of love: Techniques of moral transformation. Templeton Foundation Press.

Spitzer, R. L., Kroenke, K., Williams, J. B., & Löwe, B. (2006a). A brief measure for assessing generalized anxiety disorder: The GAD-7. Archives of Internal Medicine, 166(10), 1092–1097.

Spitzer, R. L., Kroenke, K., Williams, J. B. W., & Löwe, B. (2006b). A Brief Measure for Assessing Generalized Anxiety Disorder: The GAD-7. Archives of Internal Medicine, 166(10), 1092–1097. https://doi.org/10.1001/archinte.166.10.1092

Spurk, D., Hirschi, A., Wang, M., Valero, D., & Kauffeld, S. (2020). Latent profile analysis: A review and “how to” guide of its application within vocational behavior research. Journal of Vocational Behavior, 120, 103445. https://doi.org/10.1016/j.jvb.2020.103445

Stauber, L. G., & Stutts, L. A. (2021). The relationship among spirituality, self-compassion, and body satisfaction in college students. Spirituality in Clinical Practice, No Pagination Specified-No Pagination Specified. https://doi.org/10.1037/scp0000284

Steffen, P. R., & Larson, M. J. (2015). A Brief Mindfulness Exercise Reduces Cardiovascular Reactivity During a Laboratory Stressor Paradigm. Mindfulness, 6(4), 803–811. https://doi.org/10.1007/s12671-014-0320-4

Steger, M. F., Frazier, P., Oishi, S., & Kaler, M. (2006). The meaning in life questionnaire: Assessing the presence of and search for meaning in life. Journal of Counseling Psychology, 53(1), 80.

Steger, M. F., Hicks, B. M., Krueger, R. F., & Bouchard, T. J. (2011). Genetic and environmental influences and covariance among meaning in life, religiousness, and spirituality. The Journal of Positive Psychology, 6(3), 181–191. https://doi.org/10.1080/17439760.2011.569172

Sternberg, R. J. (1986). A triangular theory of love. Psychological Review, 93(2), 119.

Sternberg, R. J. (1995). Love as a story. Journal of Social and Personal Relationships, 12(4), 541–546.

Sternberg, R. J. (1996). Love stories. Personal Relationships, 3(1), 59–79.

Sternberg, R. J., & Grajek, S. (1984). The nature of love. Journal of Personality and Social Psychology, 47(2), 312.

Sternberg, R. J., & Sternberg, K. (2018). The new psychology of love. Cambridge University Press.

Sternberg, R. J., Sternberg, R. J., & Weis, K. (2006). The New Psychology of Love. Yale University Press.

Stevens, L. C., & Woodruff, C. C. (2018). The neuroscience of empathy, compassion, and self-compassion. Academic Press. https://books.google.com/books?hl=en&lr=&id=ayokDwAAQBAJ&oi=fnd&pg=PP1&dq=self-compassion+neuroscience&ots=em9j140MxX&sig=iVi65yF_-zNfLmTPrn1LLheHTmc

Stevens, L., Gauthier-Braham, M., & Bush, B. (2018). The brain that longs to care for itself: The current neuroscience of self-compassion. In The neuroscience of empathy, compassion, and self-compassion (pp. 91–120). Elsevier. https://www.sciencedirect.com/science/article/pii/B9780128098370000040

Stevenson, J. C., Emerson, L.-M., & Millings, A. (2017). The Relationship Between Adult Attachment Orientation and Mindfulness: A Systematic Review and Meta-analysis. Mindfulness, 8(6), 1438–1455. https://doi.org/10.1007/s12671-017-0733-y

Stroope, S., Draper, S., & Whitehead, A. L. (2013). Images of a Loving God and Sense of Meaning in Life. Social Indicators Research, 111(1), 25–44. https://doi.org/10.1007/s11205-011-9982-7

Tanay, G., & Bernstein, A. (2013). State Mindfulness Scale (SMS): Development and initial validation. Psychological Assessment, 25(4), 1286.

Tang, Y.-Y., Hölzel, B. K., & Posner, M. I. (2015). The neuroscience of mindfulness meditation. Nature Reviews Neuroscience, 16(4), 213–225.

Tein, J.-Y., Coxe, S., & Cham, H. (2013). Statistical power to detect the correct number of classes in latent profile analysis. Structural Equation Modeling: A Multidisciplinary Journal, 20(4), 640–657.

Templeton, J. (1999). Agape love: Tradition in eight world religions. Templeton Foundation Press. https://books.google.com/books?hl=en&lr=&id=vQM8mKPjGgcC&oi=fnd&pg=PT7&dq=love+religion&ots=7v6XyMJgt2&sig=M0jwbtiHiEwrxsefkVH42kKqYa4

Tomlinson, J., Glenn, E. S., Paine, D. R., & Sandage, S. J. (2016). What is the “relational” in relational spirituality? A review of definitions and research directions. Journal of Spirituality in Mental Health, 18(1), 55–75.

Tran, U. S., Glück, T. M., & Nader, I. W. (2013). Investigating the Five Facet Mindfulness Questionnaire (FFMQ): Construction of a short form and evidence of a two-factor higher order structure of mindfulness. Journal of Clinical Psychology, 69(9), 951–965.

Traupmann, J., & Hatfield, E. (1981). Love and its effect on mental and physical health. Aging: Stability and Change in the Family, 253–274.

Tsai, M.-Y. (2015). Construction and factorial validation of the Chinese version of the Self-Compassion Scale for Gifted Students. Psychology Research, 5(11), 634–644.

Ullrich-French, S., & Cox, A. E. (2020). The Use of Latent Profiles to Explore the Multi-dimensionality of Self-compassion. Mindfulness, 11(6), 1483–1499. https://doi.org/10.1007/s12671-020-01365-y

Unruh, A. M., Versnel, J., & Kerr, N. (2002). Spirituality unplugged: A review of commonalities and contentions, and a resolution. Canadian Journal of Occupational Therapy, 69(1), 5–19.

Vaish, A., Grossmann, T., & Woodward, A. (2008). Not all emotions are created equal: The negativity bias in social-emotional development. Psychological Bulletin, 134(3), 383–403. https://doi.org/10.1037/0033-2909.134.3.383

van, de M. T. F. (2020). Faking It: Social Desirability Response Bias in Self-report Research. The Australian Journal of Advanced Nursing, 25(4), 40–48. https://doi.org/10.3316/informit.210155003844269

Van Gordon, W., Shonin, E., Griffiths, M. D., & Singh, N. N. (2015). There is only one mindfulness: Why science and Buddhism need to work together. Mindfulness, 6(1), 49–56.

Vance, T., Maes, H. H., & Kendler, K. S. (2010). Genetic and Environmental Influences on Multiple Dimensions of Religiosity: A Twin Study. The Journal of Nervous and Mental Disease, 198(10), 755–761. https://doi.org/10.1097/NMD.0b013e3181f4a07c

Voci, A., Veneziani, C. A., & Fuochi, G. (2019). Relating Mindfulness, Heartfulness, and Psychological Well-Being: The Role of Self-Compassion and Gratitude. Mindfulness, 10(2), 339–351. https://doi.org/10.1007/s12671-018-0978-0

Watson, D., Clark, L. A., & Tellegen, A. (1988a). Development and validation of brief measures of positive and negative affect: The PANAS scales. Journal of Personality and Social Psychology, 54(6), 1063.

Watson, D., Clark, L. A., & Tellegen, A. (1988b). Development and validation of brief measures of positive and negative affect: The PANAS scales. Journal of Personality and Social Psychology, 54(6), 1063.

Watters, A. J., & Williams, L. M. (2011). Negative biases and risk for depression; integrating self-report and emotion task markers. Depression and Anxiety, 28(8), 703–718. https://doi.org/10.1002/da.20854

Wei, L., Xie, J., Wu, L., Yao, J., Zhu, L., & Liu, A. (2023). Profiles of self-compassion and psychological outcomes in cancer patients. Psycho-Oncology, 32(1), 25–33.

Wilt, J. A., Grubbs, J. B., Exline, J. J., & Pargament, K. I. (2016). Personality, religious and spiritual struggles, and well-being. Psychology of Religion and Spirituality, 8(4), 341.

Woo, S. E., Jebb, A. T., Tay, L., & Parrigon, S. (2018). Putting the "Person" in the Center: Review and Synthesis of Person-Centered Approaches and Methods in Organizational Science. Organizational Research Methods, 21(4), 814–845. https://doi.org/10.1177/1094428117752467

Woollacott, M., & Shumway-Cook, A. (2020). The Mystical Experience and Its Neural Correlates. Journal of Near-Death Studies, 38(1). https://search.ebscohost.com/login.aspx?direct=true&profile=ehost&scope=site&authtype=crawler&jrnl=08914494&AN=161504773&h=1ti%2B2F0K5vnmwHPioOQOsVU0n7%2FLtVrSmUqZbFXmQ07DT4rk%2Ffjgxe1G14zyCn3QpBpTqNtsXa1M56LJ6ZD%2B%2Bg%3D%3D&crl=c

Wu, L., Schroevers, M. J., & Zhu, L. (2021). Positive Self-Compassion, Self-Coldness, and Psychological Outcomes in College Students: A Person-Centered Approach. Mindfulness, 12(10), 2510–2518. https://doi.org/10.1007/s12671-021-01721-6

Wu, Q., Chen, C., Liang, Y., Zhou, N., Cao, H., Du, H., Lin, X., & Chi, P. (2020). Not only the forest and trees but also the ground they are rooted in: Identifying profiles of self-compassion from the perspective of Dialecticism. Mindfulness, 11, 1967–1977.

Yip, V. T., & Tong M. W., E. (2021). Self-compassion and attention: Self-compassion facilitates disengagement from negative stimuli. The Journal of Positive Psychology, 16(5), 593–609. https://doi.org/10.1080/17439760.2020.1778060

Zessin, U., Dickhäuser, O., & Garbade, S. (2015). The relationship between self-compassion and well-being: A meta-analysis. Applied Psychology: Health and Well-Being, 7(3), 340–364.

Zhang, B., Galbraith, N., Yama, H., Wang, L., & Manktelow, K. I. (2015). Dialectical thinking: A cross-cultural study of Japanese, Chinese, and British students. Journal of Cognitive Psychology, 27(6), 771–779. https://doi.org/10.1080/20445911.2015.1025792

Zhang, J. W., Chen, S., & Tomova Shakur, T. K. (2020). From Me to You: Self-Compassion Predicts Acceptance of Own and Others' Imperfections. Personality and Social Psychology Bulletin, 46(2), 228–242. https://doi.org/10.1177/0146167219853846

Zhao, M., Smithson, J., Ford, T., Wang, P., Wong, N. Y. B., & Karl, A. (2021). Self-compassion in Chinese young adults: Specific features of the construct from a cultural perspective. Mindfulness, 12, 2718–2728.

Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988a). The multidimensional scale of perceived social support. Journal of Personality Assessment, 52(1), 30–41.

Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988b). The Multidimensional Scale of Perceived Social Support. Journal of Personality Assessment, 52(1), 30–41. https://doi.org/10.1207/s15327752jpa5201_2

Zimet, G. D., Powell, S. S., Farley, G. K., Werkman, S., & Berkoff, K. A. (1990a). Psychometric characteristics of the multidimensional scale of perceived social support. Journal of Personality Assessment, 55(3–4), 610–617.

Zimet, G. D., Powell, S. S., Farley, G. K., Werkman, S., & Berkoff, K. A. (1990b). Psychometric characteristics of the multidimensional scale of perceived social support. Journal of Personality Assessment, 55(3–4), 610–617.