

Presence Scale Technical Report:
Iterative Conceptualization, Psychometrics, and Validity Evidence

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Authors' Note

This report supplements the peer-reviewed publication of the Presence Scale (Kahn et al., in press) and provides extended documentation of the iterative conceptualization, psychometric evaluation, and validity evidence supporting the scale. Portions of the methods and results reported here are drawn directly from Sabine's (2023) Master's thesis.

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Extended Abstract

This technical report details the four-year process through which we developed and completed an initial validation of the Presence Scale (see [Appendix K](#) or Table 20 for the finalized scale). The Presence Scale is a 14-item self-report measure of Presence, a hierarchical construct composed of three factors: Stillness of Mind, Present Moment Awareness, and Consciousness Beyond Self. Our goal in creating the Presence Scale was to have a self-report measure from which we can draw inferences about the degree to which a person experienced Presence during a recalled experience or, eventually, following an experimental condition or immediately after an experience in everyday life. Our formal definition of Presence and its three factors are provided below:

Presence is the state of being in which conditioned thinking ceases, and the mind is open, aware, non-reactive, and still; and often a witness of itself. In this state, one can experience one's consciousness as expanding, and one's self as becoming part of something larger than the self. Presence is the mind attuned. Subject, not object. Life affirming.

Stillness of Mind occurs when discursive thinking subsides and the mind is clear, calm, and settled.

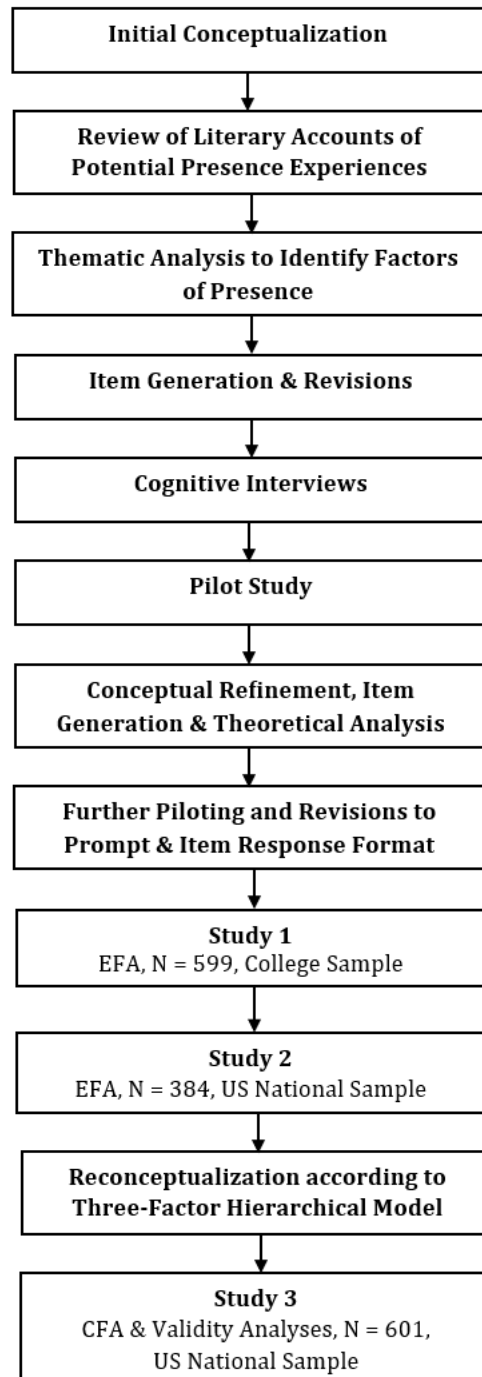
Present Moment Awareness occurs when one is open to and aware of the now, of the present moment, of being, even if one is involved in activity.

Consciousness Beyond Self occurs when one's consciousness seems to expand beyond the confines of the body and mind, and potentially the self merges—one experiences becoming One—with another entity or realm.

The formal presentation of Presence and the core empirical evidence supporting the validity of the Presence Scale are reported in Kahn et al. (in press). This technical report provides the comprehensive methodological and empirical foundation underlying those findings as well as supplemental validity evidence. Here, we document the entire scale development process, including conceptual iterations, pilot studies, factor analyses, and item-level psychometric evaluation that extend beyond the scope of the journal article (see Figure 1 for an overview). Through providing transparent information about our scale development process, this report serves as a resource for researchers who wish to evaluate the Presence Scale and implement it with fidelity in their own work.

Figure 1

Overview of the Development of the Presence Scale



Note. While this overview highlights specific phases of conceptualization, it is important to emphasize that reconceptualization occurred continuously throughout most of the scale development process. Even outside formal steps like “Cognitive Interviews,” conceptual development was a constant effort, with frequent adjustments during weekly research team meetings. Researchers should be aware that this iterative process is integral, especially when developing scales for complex constructs.

We begin with an overview of our early conceptual work and review of related constructs that helped us develop the construct of Presence. We then describe our process of generating an initial pool of scale items, guided by our early conceptual work and by a review of accounts of Presence-like experiences in non-academic literature. We next detail cognitive interviews conducted to narrow our item pool. Following cognitive interviews, we describe our first empirical pilot study evaluating various models of Presence. Based on the findings of this first pilot study, we refined our hypothesized factors of Presence, generated and revised more items, and revised our prompt and item rating scale. Following this period of revisions, we conducted three large empirical studies to provide initial evidence for the validity of the Presence Scale, which have been reported in Sabine (2023) and Kahn et al. (in press). This technical report presents the main findings of those three studies as well as findings pertaining to the validity argument for the Presence Scale that were not reported in Kahn et al. (in press). Study 1 was an exploratory factor analysis study with a group of college students ($N = 599$). We then replicated the findings of this study with a national sample from the United States (Study 2, $N = 384$). Based on the findings of these first two studies, we revised our hypothesized model of Presence, the process of which is detailed in this report. We then narrowed our item pool from 35 items to 14 items. Finally, we conducted a confirmatory factor analysis on the final 14-item version of the Presence Scale with another national sample from the United States (Study 3, $N = 601$).

Our hope is that this technical report can serve as a resource for several groups of readers. First, this report may be useful to those seeking to implement the Presence Scale in their own

research and who wish to learn more about the construct of Presence. For example, readers interested in the construct and theory of Presence may find the details of the process of developing the scale items relevant to better understanding Presence. Others may find the descriptions of Presence experiences presented in [Appendix A](#) and [Appendix C](#) helpful to more fully understand Presence and different ways in which it can be experienced. Second, readers who are interested in constructs that are related to Presence, such as mindfulness, flow, and self-transcendence may find the additional validity analyses conducted in Studies 1-3 may be of interest. Finally, we hope this report is useful to others who are developing self-report measures of abstract psychological constructs or who are teaching about this topic. Researchers developing self-report scales, particularly scales that have not been measured through self-report before, may find our early process of conceptualization and pilot studies useful since these steps tend to only be briefly summarized or skipped in journal articles introducing new scales. Additionally, those teaching on this topic could share excerpts of this report to show an example of one way to follow best practices to create a new self-report measure.

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Initial Conceptualization and Item Generation

Our group's interest in Presence emerged from a range of experiences and disciplines. Some of us developed an interest in Presence through both the intellectual study and long-term practice of contemplative traditions and philosophies, which shaped the way we approached the concept. Others came to an interest in Presence by seeking to understand what it means to be fully 'there' in an environment and experiencing the psychological benefits of an interaction, environment, or simply living in the present moment. Still others focused on the psychological affordances of specific environments, such as nature (see paragraph below). Regardless of our varied and sometimes overlapping pathways to the study of Presence, we recognized the need for an empirically valid measure of a construct that, while sharing features with other optimal states of being, had not been fully captured by existing self-report measures.

Our initial goal was to measure the degree to which one was psychologically immersed and engaged in a nature experience. Drawing on literature from positive psychology (e.g., flow, mindfulness), immersive experiences (e.g., virtual reality), and our research team's early thinking about Presence (Kahn, 2020), several of us piloted a very early eight item measure of Presence in nature with a group of Girl Scouts with whom we were already conducting research. The findings from this study have been published elsewhere (Gray et al., 2023, 2025). However, this pilot measure had poor internal reliability and was not subjected to rigorous validation. We then sought to more comprehensively develop Presence as a construct and, simultaneously, a psychometrically sound measure of Presence. Thus, our four-year investigation of Presence began.

We embarked on this larger investigation of Presence by reviewing literature on several constructs related—in varied ways—to what we considered to be Presence at the time:

mindfulness, distraction, mind-wandering, rumination, flow, and nondual awareness. We aimed to understand how Presence was different from each of these constructs, but also what such psychological states had in common with one another. Our team discussed the commonalities among these constructs in weekly meetings, identifying dimensions with which they could be differentiated, such as the intentionality of entering each psychological state, the affective valence of the state, and whether the focus of one's attention was more so outward or inward. From these conversations, we began articulating key characteristics of Presence. We then began informally developing candidate items to measure these characteristics, grouping similar items together and iteratively revising how we thought of the key characteristics of Presence. At this time, our process of item generation and factor conceptualization was not yet systematic as our primary aim was to establish a shared understanding of Presence.

The working definition of Presence developed during this early stage of conceptualization and item generation was as follows:

Presence is the psychological experience in which conditioned thinking ceases and the mind is open, attentive, and still. Self-concept dissolves. Consciousness merges with one's environment, activity, another person, and/or what is experienced as another realm of existence. Awareness remains unbounded yet engaged with the immediate moment.

Thoughts and actions flow with freedom and clarity.

At this stage, we had suspected that Presence was a higher-order construct composed of four factors: 1) Soft Outward Attention, 2) Open Non-Conditioned Thinking, 3) Active Embodied Perception, and 4) Small, Merged Self.

The first factor, Soft Outward Attention, directly reflected two parts of the working Presence definition: "Awareness remains unbounded yet engaged with the immediate moment"

and that the mind is “attentive.” The “soft” part of Soft Outward Attention drew upon Kaplan’s (1995) concept of “soft fascination,” one of four features of restorative environments outlined by Attention Restoration Theory. Soft fascination is marked by attention that is broad, effortless, and affords mental space, leaving room for mental reflection (Basu et al., 2019; Kaplan & Kaplan, 1989). However, soft fascination does not *require* reflection. In the context of Presence, we suspected Soft Outward Attention affords a state of simply being, rather than a state of reflection. The “outward” part of this factor name implies that the attention is away from the self and toward the environment, activity, another person, and/or what is experienced as another realm of existence (e.g., a higher power). This further implies that self-reflection, whether positive or negative (as in rumination), contradicts the experience of Presence. The word “awareness” was chosen over alternatives such as attention or fascination so as to deemphasize cognition (e.g., dedicating cognitive resources to attend to a specific stimulus) and instead broadly include perceptual awareness. Additionally, our choice to use “awareness” drew from literature on effortless mindfulness, as opposed to deliberate mindfulness—intentionally paying attention to the present moment in a non-reactive, non-judgmental way (Kabat-Zinn, 2015).

The second factor, Open Non-Conditioned Thinking, similarly reflects several parts of the Presence definition: “conditioned thinking ceases” and the mind as “open” and “still.” “Open” thinking implies that one holds a non-judgmental stance toward their thoughts, if there are any thoughts at all. This aligns with the non-judgmental stance toward one’s experience characteristic of mindfulness (Kabat-Zinn, 2015). “Non-conditioned” suggests that the mind is free from cyclical or compulsive thought patterns, such as negative self-talk or even simply thinking through one’s daily “to-do” list. This factor suggests that thoughts do not get in the way of one’s experience.

The third factor, Active Embodied Perception did not directly reflect the Presence definition, though we conceptually connected this factor to the “immediate moment” aspect of the definition. Active Embodied Perception describes one’s senses being engaged such that sensory input from the body-environment interaction leads to feeling fully immersed in the immediate environment. We suspected that one’s Presence experience might be dependent on interaction with their environment, particularly through the senses. For example, one quintessential Presence experience that our team used to discuss potential factors and descriptors of Presence included jumping into cold water. This Presence experience was made possible due to the features of the environment (a body of water large enough to jump into), the strong sensory stimulus (cold water), and the engagement of the whole body in that sensory experience (by immersing one’s full body in the cold water).

The fourth factor, Small, Merged Self reflected the following phrases of the Presence definition: “Self-concept dissolves. Consciousness merges with one’s environment, activity, another person, and/or what is experienced as another realm of existence.” The notion of “small” in Small, Merged Self drew upon the term “small self” which is theorized to occur during experiences of awe and marked by the sense that one’s sense of self has diminished (Piff et al., 2015), “merged” implied a diminishment of boundaries between the self and “other,” resulting in a sense of oneness. The “other” may be, for example, one’s environment, another being, a higher power; we did not make a commitment as to what one might merge with. This concept of merging also drew upon self-transcendence, characterized in part by a sense of connection or oneness (Yaden et al., 2017).

These four initial factors guided the development of a preliminary item pool. Individual team members wrote items on their own, primarily drawing on our conceptualization of Presence

as well as, at times, scale items measuring related constructs. Members of our research team drafted 111 potential items thought to be measuring the four factors.

As we developed these items, the team was engaged in extensive conceptual debates: Were all four of these factors equally central to Presence? Could we move forward with the factor “Active Embodied Perception” if it was not adequately connected to the overall definition of Presence? Were other factors such as mental stillness, a sense of grounding, and openness to the present moment worth considering? Were we missing anything key to Presence experiences? Although we agreed that Presence was multi-faceted hierarchical construct, we did not yet know which facets were theoretically germane to this construct. We also knew that our working definition needed improvement; for instance, not all team members were in agreement as to whether the last sentence of the definition was warranted.

Instead of refining and then piloting our drafted items, we realized that our focus needed to shift to conceptual development of Presence and its lower-order factors, as it is critical for researchers working with new constructs to have a tentative theoretical model before developing a measure (DeVellis, 2017). Thus, our team decided to review literary accounts of what we considered to be Presence experiences. We then used these passages to develop a larger item pool and subsequently identify theoretically central features, or factors, of Presence.

Review of Literary Accounts of Presence-like Experiences

To this end, our research team gathered 128 literary passages that we believed described potential experiences of Presence. Research team members involved in the conceptualization of Presence each had read books or other works which reminded them of Presence. Members of the research team were well versed in literature in different areas, and we individually scoured through our book collections to find anything that might be relevant to Presence. In addition to

the books we had access to, some quotes were found through podcasts or interviews or through searching for quotes and texts on the Internet. For instance, some quotes were taken from goodreads.com and from searching for tags or authors, especially in cases where we did not have easy access to the actual text. It should be noted that many other literary accounts related to Presence were drawn upon at earlier time points when initially conceptualizing Presence; however, 128 accounts were specifically identified in this stage.

We strove to find texts describing a wide range of contexts and themes in which Presence can be experienced, including but not limited to: nature, mindfulness, philosophy, psychology, performance, drugs, and indigenous perspectives. We also included a range of spiritual perspectives including Zen Buddhism, mysticism, and transcendentalism. The authors of our selected texts had a diverse range of nationalities including American, British, Canadian, Czech, Danish, Dutch, German, Hungarian, Indian, Irish, Persian, Scottish, Swedish, Tibetan, and Vietnamese. See [Appendix A](#) for a sampling of exemplary quotes we consulted and their citations.

As an example of a passage identified during this review, Carl von Essen (2010) describes an experience we consider to be Presence:

I felt [the elk's] presence and somehow knew that they felt mine. As I stood there, the sense of time remarkably changed. What seemed like minutes I found later could have been over an hour. An intense feeling of clarity of the scene swept over me. All of my senses seemed to sharpen to an exquisite razor's edge. I heard the tiniest sounds of distant streams and the rustling leaves as if magnified in a celestial amplifier. Everything seemed close to me and I felt, amazingly, a sort of merger of myself with everything, a sense of belongingness. I was connected with everything in that panorama, the grass, trees, rocks,

insects, birds, the elk that I knew were quietly moving uphill, out of my sights. I felt a great rush of emotion, joy at being alive, the chance to exist along with something else. I will never forget that day. (pp. 35-36)

This quote exemplifies key characteristics of Presence: he was completely immersed in the present moment such that his sense of time changed, his awareness deepened, and his senses were sharpened and fully engaged. He felt a part of things beyond himself and a sense of joy at being alive.

After collecting passages, we drafted 511 candidate scale items inspired in content and language by these passages. The 111 items from the initial non-literature item generation process were added to these, resulting in a total of 622 unique potential scale items.

Thematic Analysis of Initial Item Pool

To identify key characteristics of Presence, we then engaged in a thematic analysis of the 622 scale items. Items were evenly divided into four groups of 155 items each, three of which were distributed among three members of the research team and the fourth of which was reserved for later. Working only on their assigned group of items, each team member grouped thematically similar items, and divided up large groups into smaller, more specific groups. Two graduate students (the first and second authors) and a lab volunteer completed this process in whatever manner worked best for each of us individually (e.g., one researcher used Excel and made a tagging process, another researcher printed items and did color coding, reordering, and did this process repeatedly). Once we completed our item groupings, each team member labeled their categories with a word or a few words describing the theme of the group of items. The first author (SS) then reviewed all thematic groupings, organizing them such that the same and similar themes from across researchers' thematic groupings were combined as shown in Table 1.

Once thematic groups had been identified, the first author and a different research assistant reviewed the remaining 155 items and added them to appropriate thematic groups.

Table 1

Initial Organization of the Item Pool: Themes Generated by Three Researchers, Grouped by Common Themes

Researcher 1's Themes	Researcher 2's Themes	Researcher 3's Themes
Sense of connection with the self and surroundings Sense of connection with the self and something else Oneness	Connection to or synchrony with surroundings	Merging/oneness /connectedness
Boundaries disappearing	Transcendence of social boundaries, norms, reality	
Distorted sense of time	Distorted sense of time	Distorted perception of time
Present moment: A) Mind and attention in the present moment Present moment: B) Miscellaneous present moment	Present moment awareness	
Awareness opening up Awareness towards surroundings Attention directed towards surroundings	Centered awareness	Soft, outward attention
Diminished sense of self	Diminished sense of self	Diminished self-concept
Connection between thoughts and experience/surroundings/senses (Also: lack of this/no thoughts)		Embodied sensation/perception (i.e., interplay between environment and mind)
Senses: Vision specific Senses Engaged		Heightened sensation
Difficult to describe the full scope of experience	Difficult to account for in words	Ineffability
New perspective Perspective shift about oneself/ one's life		
Deep discovery (greater than perspective shift) Something deeper in the moment (behind thoughts emotions...) Experience doesn't seem real Moving/profound experience	New perspective	Revelations/insights
		Significance/

		superconsciousness/ spiritual valence
Healing	Restoration	Restoration
General openness to the situation Non-analytical/non-judgmental towards surroundings/experience	Openness to experience Control over environment or experience	Open (non-judgmental), non- conditioned thinking
Peace	Peace	
	Stillness	Stillness/Quietness
Clear mind	No mind Quiet Mind	
Freeing	Free	
True self/Authentic to oneself	True Self	
Curiosity	Intrigue, curiosity	
Surroundings play an important role	Intensely consuming	Immersion/Experiential engagement
Full body/mind experience	Integrated self	
Misc. positive valence in self/enjoyment		Positive valence
Activating, energizing	Energy transfer	

Note. The three researchers also created some thematic grouping that did not overlap with one another: Positive feelings for surroundings, Involves body, and Involves breath (Researcher 1); Depth of experience, Merging of action and awareness, Savoring, Depth of perception, and Lingering (Researcher 2); and Contentment/complacency, Paradoxical elements, and Uncategorized items (Researcher 3).

After each of the 622 items were categorized into a specific thematic group, the research team reviewed the items to create more specific groupings of items within each theme. For instance, items under the theme “Distorted Sense of Time” were divided into the following subthemes: “Time stopped,” “Feeling a sense of timelessness,” “Feeling that the passage of time changed,” “Unaware of time passing” and “Other time-related items.” See [Appendix B](#) for all groupings of the 622 items. Typically, each item was listed under one theme; however, 38 items had substantial conceptual overlap with two themes, and thus were listed in two themes. Linkages between themes were also identified to create higher order groupings of themes, which became our hypothesized factors of Presence.

Through this process, ten potential factors of Presence emerged: Present Moment Awareness, Keen Sensory Awareness, Stillness of Mind, Non-Judgmental Mind, Clarity and Freedom of Thought and Action, Diminished Self-Concept, Authenticity of Self, Expansion of Consciousness, Merging of Consciousness, and Activation of Energy. There was also a Miscellaneous factor containing themes, subthemes, and items that did not fit one of the ten factors and were not as conceptually relevant to combine with other themes to constitute their own factor. For instance, we suspected the theme “Restoration/Healing” might be an outcome of Presence rather than a part of Presence itself. Thus, this theme was placed in the Miscellaneous factor as a contender for deletion.

We debated the extent to which each of these 10 potential factors were central to Presence and warranted being part of the conceptual model of Presence. Through that process, Keen Sensory Awareness, Clarity and Freedom of Thought and Action, Diminished Self-Concept, Authenticity of Self, Activation of Energy, and the Miscellaneous category were removed.

Keen Sensory Awareness was omitted because we did not think that having all senses engaged was necessary to experience Presence. This factor was composed of themes including “Heightened sensation”, “Senses engaged”, “Senses: vision-specific”, and “Sense of connection between self and senses.” Although feeling as though one’s senses are coming alive may be linked to enhanced Presence, it is likely the case that this can engender Presence as opposed to being a component of Presence. However, given that sensory engagement emerged from this literature review, future research should investigate whether multi-sensorial experiences could facilitate greater Presence (e.g., Gray et al., 2025).

Clarity and Freedom of Thought and Action was omitted as it did not have many items and was too broad to be a single factor. This factor was composed of the themes “Ease of thinking” and “Merging of action and awareness” (a characteristic of flow; Csikszentmihalyi, 1990). We originally had this phrase as a part of our definition of Presence, but we realized that it was not conceptually central to Presence. Thus, the last sentence of our working definition of Presence was cut as we developed our conceptualization of Presence.

Similarly, Authenticity of Self did not have enough items to warrant it being central to Presence. This factor was composed of themes of “True self,” “Integrated self,” and “Full body and mind experience.” We suspected that feelings of authenticity might be more likely to emerge for particularly strong Presence experiences and it might not be characteristic of weaker Presence experiences. Additionally, we decided that perceived authenticity might be an outcome of Presence experiences rather than characteristic of the experience of Presence itself.

Three of the ten factors with common conceptual elements were identified as needing to be narrowed down in some way: Merging of Consciousness, Diminished Self-Concept, and Expansion of Consciousness. Given the sheer number of items developed from our literature review that gave rise to the subthemes and themes comprising Merging of Consciousness, we knew that this factor was of great theoretical importance; however, we extensively debated whether to keep Diminished Self-Concept or Expansion of Consciousness. Our Diminished Self-Concept factor does not imply one feels denigrated; rather, it characterizes the ego giving way to a “small self” (Piff et al., 2015). This factor was ultimately cut because we recognized it as a potential pathway to experiencing Expansion of Consciousness and Merging of Consciousness, rather than characteristic of Presence itself: as one’s sense of self shrinks and fades, it may be

replaced with a sense of expansion or merging. Thus, we decided to move forward with Merging of Consciousness and Expansion of Consciousness as potential factors of Presence.

After many rounds of examination of the factors and conceptual debate, five most theoretically salient factors of Presence emerged: Present Moment Awareness (PMA), Stillness of Mind (ST), Non-Reactive Mind (NR), Expansion of Consciousness (EXP), and Merging of Consciousness (MER). At this stage we did not yet have formal definitions for these factors, but from the items we had a shared understanding of what we were trying to capture.

Within each of these factors, we completed rounds of item revision and new item generation based upon the best items that captured our factors. For the initial item generation process, researchers were simply trying to express characteristics of the five factors of Presence in varied language; we were not carefully considering best practices of scale item development. For instance, many of these items were double-barreled or contained two different ideas, and research has shown this unnecessarily adds error variance (DeVellis, 2017). Therefore, we iteratively revised items to avoid this.

We also followed Gehlbach & Brinkworth (2011)'s advice to "strive to ensure that every part of every question [or item] applies to every respondent" (p. 383). For instance, over 70 items in our item pool used the word "surroundings"; however, we realized that people experiencing Presence while meditating and/or with their eyes closed might have difficulty answering an item about their surroundings. Indeed, feeling connected to one's surroundings might occur in some kinds of Presence experiences, but might not be applicable to all Presence experiences. We therefore decided that all items with that term needed to be cut or revised to ensure that the Presence items would be applicable to a wide range of respondents and experiences.

In the early stages of item generation, it is also beneficial to come up with many ways of saying the same idea (DeVellis, 2017); thus, multiple researchers came up with alternative words or phrases for our item contenders. See Table 2 for an example of this process. After reviewing sets of similar items, typically none, one, or two were kept. Eventually, the item pool was narrowed down to 59 items measuring the five factors.

Table 2

Example of Items Similar to the Item “The boundaries between myself and everything else blurred”

The boundaries between myself and everything else blurred. (Nour et al., 2016)	The everyday distinctions between myself and everything else softened.	The boundaries between things seemed to fade.	The boundaries in what I was experiencing seemed to fade.	Boundaries between what was me and what was not me disappeared/faded.
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According to the best practices of scale development (Boateng et al., 2018; Carpenter, 2018), it is recommended to conduct a form of pre-testing prior to running an empirical pilot study to evaluate theoretical models. We therefore conducted cognitive interviews to assess clarity, interpretation, and preference across items, with the goal of item refinement.

Cognitive Interviews

Beginning with our cognitive interviews, all procedures described in this technical report were deemed exempt from oversight by the University of Washington Institutional Review Board (IRB: STUDY00012489).

Method

Participants

Fifteen individuals (9 females, 6 males) were recruited to participate in cognitive interviews. Participants' mean age was 34.4 ($SD = 16.9$, range = 20 – 71). All participants were English speakers and 26.6% were bilingual, including Spanish, French, Italian, Hindi, and Punjabi speakers. A range of religious beliefs were represented, including atheist, agnostic, Buddhist, Catholic, Jewish, Methodist, and Pagan. In addition, some participants indicated that religion was not an important part of their identity. Sixty percent of participants had a bachelor's degree or higher. Participants had lived in 19 different states in the U.S. ($M = 2.8$ states) at various points in their life, and four had previously lived abroad in countries including Canada, France, Germany, India, Italy, and Nepal.

Procedure

Participants were recruited through a personal invitation from graduate and undergraduate student members of the research team. We carefully selected this group of participants to include a variety of life experiences, backgrounds, ages, education levels, and religious affiliations. We operated under the assumption that most people have experienced some degree of Presence, but that the frequency and strength of Presence experiences may vary between and within individuals. We sought to include a segment of participants who we suspected would be open to a discussion about Presence and offer unique perspectives on Presence. For instance, we included a graduate student of religious studies and a tenured professor in the department of romance languages and literatures. We also included a Buddhist monk, a professional dancer, an occupational therapist, a professional white-water rafting and outdoor adventure guide, and a musician.

We also hoped to learn from individuals whose life experiences and experiences of Presence were different from our own or from the perspectives discovered through our review of non-academic literary accounts of Presence. We especially valued these interviews because our goals included soliciting suggestions to improve the wording of our items and hearing the language participants used to describe their own Presence experiences. To this end, we included a couple of college students with no connection to this area. We also sought to include a few individuals with anxiety and an individual who had experienced homelessness. We included atheist individuals and individuals with varying religious backgrounds. Additionally, we suspected that many individuals in this sample might have leaned politically liberal or independent, so we also included at least one participant whom we knew was highly politically conservative. Although our sample does not fully represent the range of identities and experiences we think would be relevant to how one experiences or thinks about Presence, as that would not be possible for a small sample size of 15, we made a strong effort to recruit a sample of individuals with diverse lived experiences.

During the recruitment process, participants were informed that our research team was developing a scale to measure a new psychological construct and that we were especially interested to hear their perspectives to assist us with improving our items to measure the construct. Participants gave their informed consent and an interview session was scheduled. The interviews were conducted virtually through Zoom during March of 2021 when local social distancing restrictions were in place due to the COVID-19 pandemic. The participant was joined by two to three researchers from our team, and all individuals kept their videos on for the interview. Interviews lasted between approximately 90 and 120 minutes.

Each interview began with introductions and the participant described their profession, interests, and any aspects of their identity that they wished to share. Participants were reminded of the subject of the interview: our research team is working to develop items to measure a new construct and we are trying to reduce the number of and improve the items. They were informed that they would be presented with five pages with groups of items, and that they would share their impressions of the items and answer questions about the items and item groups one page at a time. The items were grouped by factors, though no factor names were shared on the page, and the factor order was consistent across all participants (PMA, ST, NR, MER, and EXP). Participants were told that “there are no right or wrong answers, our research team simply wants to understand how you are interpreting the statements” and that they could stop at any time.

The researcher leading the interview then shared their screen and confirmed that the participant could see and read the items. The participant was given the context that, for the final version of the scale, future participants would be given a prompt and asked to think of an experience where they were immersed in the present moment. Keeping that experience in mind, future participants would then rate their agreement (from *strongly disagree* to *strongly agree*) on each item. After sharing the context of how the scale would be used, the researcher paused to allow the participant to ask questions, and to read through all of the items on the first page.

After reading the items, the participants were asked to share any initial impressions of the items. They were asked if any of the items they had to read twice or were unclear to them. They were informed that the scale would be used for adults in general over 18, so we asked if they thought any of the items might be unclear to other adults. They also were asked to state any items that resonated with them or favorites of the section. We asked about their preferences and interpretation of different language being used in the items since we told them we were trying to

narrow down the items. Overall, we tried to have each participant make comments on as many items as possible, if not on all items. We often asked additional questions about item interpretation, such as asking, “what does this item mean to you.” We also encouraged them to share any suggestions to improve the items.

After each page of questions, we asked three questions about the items as a group: 1) “are there any of these items that you would strongly agree with all of the time in your everyday life,” 2) “are there any items that you have never experienced before,” and lastly 3) “if you had to say a few words for a theme for the items you just read about, what would you say.” The first two questions aimed to identify items that might be vulnerable to ceiling or floor effects, respectively. This final question served as a conceptual check to assess content validity if the themes mentioned by participants matched our conceptual understanding of our hypothesized factors. Participants were not told any of the factor names.

At the end of the session, after sharing their interpretation and thoughts about all of the items, participants were asked, “when you think about everything you’ve read today, of all the items that made sense to you, would you say you’ve had an experience where you’d resonate with all of the items?” This question was asked to preliminarily investigate what kinds of potential Presence experiences people choose to share. Upon completing the interview, participants were thanked for volunteering their time. Participants also completed a brief demographics survey on Qualtrics following their participation.

After an interview was conducted, minor revisions were often made before interviewing the next participant. For instance, any grammatical errors raised were generally corrected so that the next participant would see the corrected item. Some new items were also added based upon participants’ suggestions or feedback. For example, for the first few participants we included the

item, “When you take a muddy bucket of water and let it sit it will become clear. It felt like my mind experienced something like that.” However, a participant commented that the word “sandy” would make this metaphor easier to understand than the word “muddy.” We agreed with this participant, so we switched to piloting that tweaked version of the item. Thus, in addition to the 59 planned items, 12 new or significantly altered items were given to some participants, meaning a total of 71 items were used (see Table 3). On occasion, if participants consistently found an item confusing or jarring, we omitted the item and stopped sharing it with new interview participants. For instance, the first few participants found the item, “I experienced my awareness to be my own deepest essence” to be confusing. Furthermore, when the participants verbalized what they thought the item meant, their understanding of the word “essence” was different than our intended use of the term. Therefore, we omitted showing this item to future participants.

Table 3

Cognitive Interview Items Shown to Participants, Organized by Hypothesized Factor

Factor	Item	Participant Number who viewed the item
PMA	Nothing else seemed to matter outside of the(that?) present moment.	1, 2, 7, 8, 10, 12, 14
PMA	In that present moment, nothing else seemed to matter.	1, 2
PMA	Nothing else seemed to matter outside of the present moment.	3, 4, 5, 6, 7, 9, 11, 13, 15
PMA	Nothing else seemed to exist outside of that experience.	1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13,14, 15
PMA	My awareness permeated the here-and-now	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12
PMA	My awareness was grounded in the here-and-now	1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 13, 14, 15
PMA	I was not preoccupied with thoughts unrelated to my immediate experience	1, 2, 3, 4, 5, 6, 7, 8, 9, 10

PMA	I was not preoccupied with thoughts of the past or future	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
PMA	I experienced a sense of timelessness	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
PMA	I experienced a pervasive sense of eternity	3, 4, 5, 6, 8, 9, 10
PMA	My awareness was fully centered in the present moment.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
PMA	Without having to try, my awareness was fully in the here-and-now	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
PMA	Effortlessly, I felt present to the here-and-now.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
PMA	I felt as though I surrendered myself to the present moment.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
PMA	It was as though I dropped an anchor through time, tethering myself to the present moment	2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
PMA	I felt as though I side-stepped the passage of time	3, 4, 5, 8, 9, 10
ST	There were periods when I was free of thought yet highly aware.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
ST	There were moments when my mind felt still.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
ST	I experienced a gap of stillness between my thoughts.	1, 2
ST	After one thought ended, I had a gap (of stillness) before the next thought began	3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
ST	There were moments when I felt a deep sense of stillness.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
ST	When you take a muddy bucket of water and let it sit it will become clear. It felt like my mind experienced something like that.	1, 2, 7
ST	When you take a sandy bucket of water and let it sit it will become clear. It felt like my mind experienced something like that.	3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15
ST	It felt as though the cobwebs in my mind were brushed away to reveal a clear mind.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
ST	My mind felt like a still, clear lake.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
ST	My mind felt at ease.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
ST	There were moments when my thoughts quieted.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
ST	The mental noise in my head quieted	3, 4, 5, 9, 12, 13, 14, 15

ST	A flame of a candle flickers when lit, but then becomes still. My mind became still like that flame.	2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
ST	If you give a cloud of dust peace and time, it will settle. If my thoughts were like dust, they settled during the experience.	2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
NR	I watched my thoughts come and go, without grabbing on to them.	1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14
NR	I watched my thoughts come and go, like leaves floating by in a stream.	1, 2, 3, 4, 5, 6, 8, 9, 10, 12, 13, 14
NR	I recognized but did not dwell on my thoughts.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
NR	Thoughts came and left my mind easily, without interfering with my experience.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
NR	I felt resistant to the experience as it unfolded. [Reverse code]	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
NR	My mind was receptive to the experience as it unfolded.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
NR	I accepted what was happening at that moment.	1, 2
NR	My mind was attentive to the experience, without feeling the need to judge it.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
NR	My expectations or anticipations about the experience disappeared.	1, 2
NR	I was unconcerned with what others might think of my experience as it unfolded.	1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15
NR	The ocean has waves but it is not particularly disturbed by them. In a similar way, my mind had thoughts but was not disturbed by them.	3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
NR	I did not feel the need to judge my experience.	12, 14
MER	I felt a sort of merging of my self with everything.	1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15
MER	I seemed to merge with something else.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
MER	I seemed to merge with something greater than myself.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
MER	I seemed to merge with something beyond myself.	1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13, 14, 15
MER	If I were a raindrop, I felt as though I merged/landed in the ocean.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
MER	I felt that my existence became a part of a greater whole.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
MER	The (everyday) boundaries between myself and everything else softened.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15

MER	I experienced a feeling of oneness in which the boundaries dissolved between what is me and what is not me.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
MER	I felt like a bubble that merged with the sea.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
MER	I could not say where I ended and where everything else began.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
MER	I felt as though the energy of this moment was flowing through me.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
EXP	I felt like the experience opened up space in my mind.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
EXP	I felt like the experience opened up unknown reaches of my mind.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
EXP	It was like some part of my mind that is hard to describe seemed to open up.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15
EXP	It was like some indescribable part(s) of my mind seemed to open up.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
EXP	It felt as if that moment accessed new(?) parts of my mind.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
EXP	The experience filled my mind with a feeling of infinity.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
EXP	I felt like my consciousness expanded.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
EXP	It felt as if a deeper part of me expanded.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
EXP	It was like my consciousness expanded into vast space.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
EXP	It was like the door of my consciousness opened wide.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
EXP	There were moments when my awareness felt boundless.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
EXP	It was like a curtain/veil lifted between me and the world around me.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
EXP	It felt like a new part of me was awakened.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
EXP	I experienced my awareness to be my own deepest essence.	1, 2
EXP	It seemed like my whole being was involved in the moment.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
EXP	I felt in touch with forces that are hard to describe with words	1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15
EXP	I felt part of possibilities in the universe greater than I can imagine	3, 4, 5, 6, 8, 9, 10

EXP	It felt like a space as vast as the night sky expanded in my mind	3, 4, 5, 6, 7, 8, 9, 10
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Note. PMA = Present Moment Awareness, ST = Stillness of Mind, NR = Non-Reactive Mind, EXP = Expansion of Consciousness, MER= Merging of Consciousness. Occasionally, a comma or minor typo was fixed after the first few interviews, and this is not reflected in the table (e.g., if Participant 1 saw an item that was missing a comma, and the rest of the participants saw that item with a comma, the table lists that all participants saw the item with the comma).

Results

Following completion of all interviews, the interviews were transcribed and labeled with a participant ID code. Participant responses were then synthesized into one large primary document and two secondary synthesis documents.

In the primary synthesis document, the items were listed in the same order in which they were presented to the participants and were grouped by factor. All of the participants' responses and accompanying ID codes were shown underneath each item on this document. This allowed the research team to see all reactions to each item. We could also refer to a specific participant's interview transcription for further details of their comments.

One secondary synthesis document served as a conceptual check of the factor definitions. Each factor was listed, and we copied over participants' responses related to the topic or theme of each item set. Overall, participants' impressions were quite similar to our factors, although participants mentioned some themes and phrases that deviated from our conceptual understanding of the factor. These comments were discussed among the research team to continue conceptually strengthening the factors and to inform future scale items.

The other secondary document synthesized participants' Presence experiences, or experiences that participants felt resonated with the items. We had previously identified certain experiences that we thought were unlikely to be Presence experiences, such as taking a stressful exam, and we wanted to ensure that participants were not referencing experiences that seemed

completely unrelated or antithetical to Presence. Results of this synthesis indicated that most participants had reported experiencing Presence before through a range of experiences, such as nature experiences, meditation and mindfulness experiences, religious and spiritual experiences, various activities such as playing music or riding a horse, experiences with others, and experiences with substances. Many of the participants' experiences contained more than one of these contexts. These results were promising early indicators that Presence is not limited to certain contexts. This proposition was assessed again in later studies.

Once the syntheses were complete, item revision recommendations were made based upon the results of cognitive interviews, mainly from the primary synthesis document. These recommendations were taken in consultation with what was theoretically appropriate. Changes resulting from this process ranged from removing items from consideration to minor changes in item wording, for example, the item "My mind was receptive to the experience as it unfolded" was revised to "I was receptive to the experience as it unfolded." Following these revisions and omissions to the items, we re-examined the factors to ensure construct representation and clarity of items within each factor. Several items were added back into the item pool that were cut prematurely. For instance, the item "My mind felt settled" was added back because we suspected that this item would be clearer than some of the Stillness of Mind items with metaphorical language. Thus, the finalized item pool contained 32 items for the first empirical pilot study. See Table 4 for a list of items piloted in the subsequent study and whether they were kept, modified, or added after the cognitive interviews.

Table 4

Items Included in Pilot Study and Their Relationship to Cognitive Interviews

Pilot Study Item ID	Item	Relationship to Cognitive Interviews
ST1	My mind felt settled.	Created after
ST2	My mind felt like a calm, clear lake.	Modified from similar item shown to all interviewees
ST3	There were moments when my thoughts quieted.	Shown to all interviewees
ST4	There were periods when I was free of thought yet highly aware.	Shown to all interviewees
ST5	If you let a bucket of sandy water sit, the water becomes clear as the sand settles. It felt like my mind experienced something like that.	Modified from similar items shown to interviewees
ST6	There were moments when my mind felt still.	Shown to all interviewees
PMA1	I felt a heightened sense of awareness.	Created after
PMA2	My awareness was grounded in the here-and-now.	Shown to 13 interviewees
PMA3	Nothing else seemed to exist outside of the present moment.	Modified from similar items shown to interviewees
PMA4	I experienced a sense of timelessness.	Shown to all interviewees
PMA5	I felt as though the energy of the moment flowed through me.	Shown to all interviewees, but switched from MER to PMA factor after interview
PMA6	I was not preoccupied with thoughts of the past or future.	Shown to all interviewees
PMA7	I felt a sense of letting go, allowing me to be fully in the moment.	Created after
NR1	I did not judge my experience.	Modified from similar item shown to interviewees
NR3	I was receptive to the experience as it unfolded.	Modified from similar item shown to all interviewees
NR4	I did not get caught up in my thoughts.	Created after
NR5	I let my experience happen, without any resistance.	Created after, but in part by revising a reverse-coded item shown to all interviewees
NR6	Thoughts that came up, if any, did not interfere with my experience.	Created after, but in part by revising an item shown to all

		interviewees that used more black-and-white language
EXP1*	It seemed like my whole being was involved in the moment.	Shown to all interviewees
EXP2	The experience filled my mind with a feeling of infinity.	Shown to all interviewees
EXP3	I felt like the experience opened up space in my mind.	Shown to all interviewees
EXP4	It was like my consciousness expanded into vast space.	Shown to 10 interviewees, related versions shown to all interviewees
EXP5	My awareness felt limitless.	Created after by modifying similar item shown to interviewees
EXP6	It was like some part of my mind that is hard to describe seemed to open up.	Shown to 1 interviewee, modified from similar items shown to interviewees
EXP7	It was like the door of my consciousness opened wide.	Shown to 14 interviewees
MER1	I felt a deep sense of oneness.	Created after by modifying similar item shown to all interviewees
MER2	I became a part of something greater than myself.	Modified from similar item shown to all interviewees
MER3	I could not say where I ended and where everything else began.	Shown to all interviewees
MER4	I seemed to merge with something beyond myself.	Shown to all interviewees
MER5	I felt my consciousness merging with everything, as though I were a wave that merged back into the sea.	Modified from similar items shown to interviewees
MER6	The boundaries between myself and everything else dissolved.	Modified from similar items shown to interviewees

Note. ST = Stillness of Mind; PMA = Present Moment Awareness; NR = Non-Reactive Mind; EXP = Expansion of Consciousness; MER = Merging of Self. These Item IDs are only used for the pilot study; Study 1-3 uses a different key for Item IDs (Table 9; Table 20).

Pilot Study

After refining and reducing our item pool to 32 items using feedback from the cognitive interviews, we set out to conduct our first pilot study. Carpenter (2018) notes that it is best practice to conduct a pilot study before a large-scale exploratory factor analysis (EFA) study. Thus, the pilot study served as a preview of how items may load onto factors and allowed us to make adjustments before investing time and resources in a larger study. The goal of the pilot study was to explore potential models of Presence, including our hypothesized five-factor hierarchical model of Presence through exploratory factor analyses. Additionally, several models were assessed through confirmatory factor analyses (CFAs) to preview how different models and analytical approaches affect the model fit. Although we understand that running multiple CFAs on the same dataset is not recommended, since this was a pilot study we wanted to understand how approximate fit indices would behave for this new construct.

Method

Participants

Two hundred and twelve participants were recruited via convenience and snowball sampling methods in April 2021. One participant was omitted due to not answering several of the Presence Scale items. All other participants ($N = 211$) responded to all 32 of the Presence items. Participants' ages spanned from 18-90 years old ($M = 30.9$, $SD = 17.9$). Undergraduate students represented 59.2% of the sample. Sixty nine percent of participants identified as female, 26.5% identified as male, 2.4% identified as non-binary, and 2% selected 'prefer not to respond'. Participants selected which racial and/or ethnic category or categories they identified with (1.4% preferred not to answer) and 57.8% were White, 26.5% were Asian, 10.5% were Biracial and 3.8% Hispanic. Participants completed the survey from all large U.S. geographic regions: West

(77 %), Northeast (13.3%), Midwest (2.4%), and South (1.4%). Five percent currently lived outside of the U.S.

Procedure

We aimed to recruit groups of participants we expected to have experienced Presence in a range of contexts. Thus, the initial recruitment processes involved sending targeted emails to leaders of various groups, clubs, and organizations asking if they would forward to their members our invitation to participate in the research study. These included a variety of religious, spiritual, and atheist groups, as well as nature, meditation, mindfulness, performance arts, and athletic groups.

Unfortunately, unless the research team had a personal connection with the group, most of the groups did not respond or forward their message to their members. As data were being collected during the COVID-19 pandemic in spring of 2021, many groups may have been inactive. Thus, the recruitment strategy pivoted toward recruiting anyone through a convenience sample.

University course instructors with personal connections to our research team forwarded a similar study invitation to their students. Students were recruited from psychology, statistics, environmental, education, and interdisciplinary courses. While most of these courses were for undergraduate students, some graduate students may also have been recruited. The research team also reached out to their personal contacts and networks using similar study invitations. To avoid issues with internet bots, this survey was not posted on social media (Storozuk et al., 2020).

Participants were notified about the study via an email or e-newsletter from a group or course that they were enrolled in. The email invited them to complete a brief, one-time, online survey where they would reflect on and write about a memorable experience in their life. They

were told to click the link to participate and to receive more information. They were also informed that they would have the opportunity to enter a raffle for the chance to win a \$100 gift card or one of five \$20 Amazon gift cards after completing the survey.

Participants who clicked the link to the study were taken to a page with the informed consent and basic information about the study procedure. Those who gave their consent were then presented with this prompt:

We are asking you to think of a memorable experience in your life where you felt fully present and immersed in that experience. This may be a kind of experience that is hard for you to fully describe with words how you felt. The experience you pick may likely have felt life-affirming. Perhaps this was a time when your mind felt free from unwanted thoughts. Perhaps you felt a part of a greater whole. Perhaps the experience left you with a lingering feeling, maybe a different outlook or a feeling of being restored, or perhaps your mind just felt like it was in a good place. Take your time and pick an experience that fits this prompt.

Participants were told that the survey contained questions about this specific experience. If they could not or did not want to think of an experience that fit the prompt, they were instructed to exit the survey. In order to continue, participants had to select the response “yes, I have an experience in mind that fits the prompt. I will only think of this experience when answering the following sets of questions.”

The prompt was displayed again and participants were asked to take a minute to remember the experience that they had chosen. Next, they answered a series of questions about their experience: 1) where they were, 2) what they were doing, and 3) how they felt during the experience. Then they answered several multiple-choice questions regarding how many people

they were with, how novel or familiar their experience was, and how long ago the experience occurred. These questions ensured that each participant had picked an experience and was remembering it.

Next, participants were shown instructions asking them to answer the following questions in terms of how they felt during the experience they had in mind. They then rated their degree of agreement with the 32 Presence items on a 7-point Likert Scale from *Strongly Agree* to *Strongly Disagree*. Items were displayed on a single survey page and were not grouped by the hypothesized factors. Instead, all participants were shown the items in the same randomized order.

Next, participants selected the context of their Presence experience from a list of 18 categories. They could select multiple categories and/or use a write in option. The categories in alphabetical order were as follows: Art or Museum, Celebration or Marking of a special event, Cooking or Involving food, Dance, Intimacy or Love, Involves Animal(s), Involves Substances, Meditation, Music, Nature, Performance, Reading or Watching a Movie, Religious or Spiritual, Ritual or Tradition, Sports or Vigorous physical activity, Travel, Video Gaming, and Yoga. They then answered demographic questions, and when they completed the survey, they had the option to be taken to a new page to enter the raffle.

Results

Characteristics of Reported Presence Experiences

The 211 participants selected a range of categories ($M = 2.91$, $SD = 1.65$) that best characterized their experiences. The top 10 categories were as follows: nature ($n = 111$), travel ($n = 71$), intimacy or love ($n = 54$), sports or vigorous physical activity ($n = 48$), performance ($n =$

45), music ($n = 41$), celebration or marking of a special event ($n = 39$), religious or spiritual ($n = 32$), meditation ($n = 31$), and involves animal(s) ($n = 29$).

Participants' descriptions of their experiences provided initial qualitative support that Presence may be beneficial for human flourishing. See [Appendix C](#) for selected examples of qualitative responses from participants who agreed or strongly agreed with the Presence items. Some participants who gave longer elaborations on their Presence experiences mention positive outcomes of their experiences, such as this 25-year-old female participant:

I was doing solo field work in a remote area of the national forest in eastern Washington. It was a beautiful day and I felt like the only person around for miles... I felt bliss. It is a state that I have felt a few times in my life, usually triggered by nature or reflective journaling. It starts as a wave of feeling over my body, almost overwhelming but in a positive way. It brought tears to my eyes. I felt fully connected to my environment and to all living things. I felt like I had a sense of belonging and purpose. I felt like the inner story/monologue of my person was quieted for a moment and what was left beneath that voice was a truer experience of being. I did not feel absorbed in my insecurities or anxieties or identities of self. I was fully present in that moment and could feel my perspective shift. I could look at my suffering and day-to-day challenges with humor and compassion. I felt light, grateful, and full of love. It was a gentle reminder of the beauty, impermanence, and interconnectedness of this world that I am usually detached from because I am so caught up obsessing about the past and future.

This participant strongly agreed with nearly all of the Presence items and it appears from her writing that she benefitted from her experience: "I did not feel absorbed in my insecurities or anxieties or identities of self," and "I felt light, grateful, and full of love." This was similar to

other participants, such as a 19-year-old female student who said, “for once in my life I wasn't anxious or calculated. I felt like I was me in the best way possible. This experience was one of the best of my life because it felt so liberating.”

In our early literature review work, themes of freedom and authenticity emerged; thus, it is not surprising that a number of participants in the pilot study characterized their experience using similar themes. Although themes of freedom and authenticity were not included as defining Presence, they may be potential outcomes of Presence experiences, an area for future research to explore.

Factor Analyses and Model Comparisons

The Presence Scale data were analyzed in R using version 4.3.1 using the *psych* and *lavaan* packages (R Core Team, 2021; Revelle, 2023; Rosseel, 2012). Each item's response distribution was assessed, and none of the items had a balanced, symmetric distribution of item responses. In particular, the *Strongly disagree* category was chosen by respondents 5% or less across all of the items. Response options *Strongly agree* through *Somewhat agree* were most frequently chosen.

Correlations across the items were assessed to test the hypothesis that items within the same hypothesized factor would be most strongly correlated with each other. Some items were most strongly correlated with other items in their hypothesized factor, such as items in the Stillness of Mind factor. However, the inter-item correlations were not as clear and distinct across the other factors. In particular, items hypothesized to be in the Expansion of Consciousness and Merging of Consciousness factors were well correlated within and between these factors, blending the factors together. Lastly, the hypothesized Present Moment Awareness items and Non-Reactive Mind items had the lowest correlations with all of the other items, both

within and across potential factors, likely due to the lowest variability in item responses for these items.

An exploratory factor analysis was conducted on the 32 items. Examining the sum of eigenvalues greater than 1 indicated 8 factors, whereas when examining the scree-plot, elbows existed at both 3 and 5, meaning that the scree-plot indicated a 3- or 5- factor solution. Parallel analysis results indicated a 4-factor solution. Using the Schmid-Leiman rotation (Schmid & Leiman, 1957), factor analysis results from our hypothesized five-factor hierarchical model indicated that 34% of the variance was explained by Presence ($\alpha = 0.90, \Omega = 0.93$). Although a hierarchical structure was observed, given the small sample size and sub-optimal properties of the items (e.g., several strong cross-loadings), these results prompted the research team to engage in a refinement of the conceptualization.

To this end, the 32 items were reviewed by members of the research team to identify items that seemed less theoretically relevant to Presence or their hypothesized factor. Thirteen items were omitted from further analyses as they no longer appeared to be strong candidates for our hypothesized factors. See Table 5 for items, means and standard deviations for these 19 items and Figure 2 for inter-item correlations.

Table 5

Pilot Study Presence Scale Items, Means, and Standard Deviations

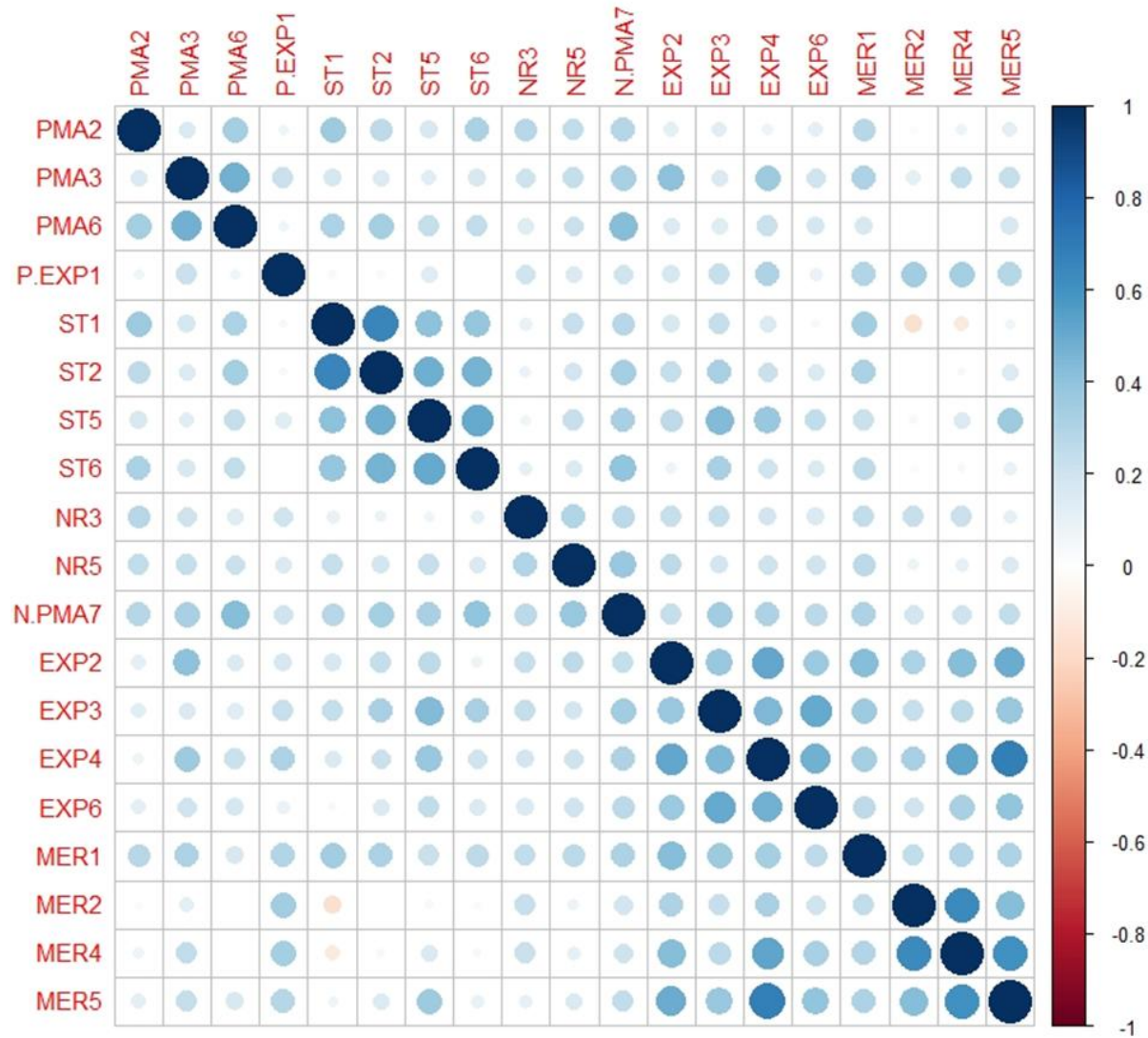
Factor	Item ID	Item	Mean	SD
Present Moment Awareness	PMA2	My awareness was grounded in the here-and-now.	1.739	1.22
	PMA3	Nothing else seemed to exist outside of the present moment.	1.919	1.34
	PMA6	I was not preoccupied with thoughts of the past or future.	2.398	1.67
	P.EXP1 *	It seemed like my whole being was involved in the moment.	1.308	0.61
	ST1	My mind felt settled.	2.223	1.59
	ST2	My mind felt like a calm, clear lake.	2.744	1.72

Stillness of Mind	ST5	If you let a bucket of sandy water sit, the water becomes clear as the sand settles. It felt like my mind experienced something like that.	2.972	1.60
	ST6	There were moments when my mind felt still.	2.408	1.49
	NR3	I was receptive to the experience as it unfolded.	1.668	0.98
Non-Reactive Mind	NR5	I let my experience happen, without any resistance.	1.668	1.01
	N.PMA7*	I felt a sense of letting go, allowing me to be fully in the moment.	1.781	1.12
	EXP2	The experience filled my mind with a feeling of infinity.	2.587	1.61
Expansion of Consciousness	EXP3	I felt like the experience opened up space in my mind.	1.981	1.18
	EXP4	It was like my consciousness expanded into vast space.	3.043	1.66
	EXP6	It was like some part of my mind that is hard to describe seemed to open up.	2.280	1.30
Merging of Self	MER1	I felt a deep sense of oneness.	2.076	1.37
	MER2	I became a part of something greater than myself.	2.194	1.42
	MER4	I seemed to merge with something beyond myself.	2.682	1.68
	MER5	I felt my consciousness merging with everything, as though I were a wave that merged back into the sea.	3.109	1.62

Note. The *s indicate that two item labels were revised. The item P.EXP1 was originally expected to fall under the EXP factor (EXP1); however, results indicated that it was grouping with more of the PMA items. We agreed conceptually it fit better under the PMA factor than the EXP factor, so we revised its item label to reflect this change. The item N.PMA7 was hypothesized to be an PMA item (PMA7), but statistically it was blending across the PMA and NR factors. We agreed that this made sense conceptually, so we revised its label as well. These Item IDs line up with the Item IDs in Table 4.

Figure 2

Visual Correlation Matrix of Item Responses



Note. Blue indicates a positive correlation, white indicates no correlation, and red indicates negative correlation. The darkness of the color and size of the circle indicate the strength of the correlation. Most items are modestly to moderately correlated with one another. A number of the ST items are grouping together well, as are many of the MER and EXP items with one another. See Table 5 to read the items that correspond with each item label.

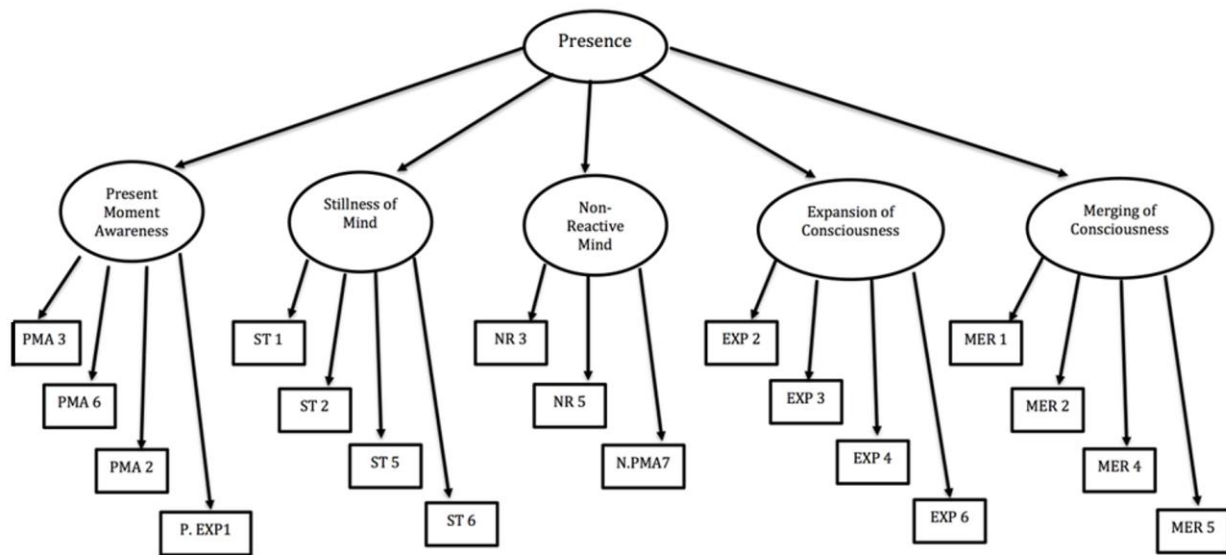
Although we still had some concerns about the remaining 19 items, we wanted to run more analyses on these items. These analyses involved assessing models using confirmatory factor analysis (CFA). While fitting multiple CFA models to the same data is typically not

recommended, we used these pilot data to assess model fit and modification indices, knowing we would conduct further studies to further develop the Presence Scale.

The first model examined, Pilot Model 1, stipulated that Presence would be the hierarchical factor and that five lower-order factors were measured by the 19 items shown in Figure 3. This model aligned with our hypothesized conceptualization of Presence as a five-factor, hierarchical construct, but with the factors measured by fewer items than the initial pool of 32 items included in this pilot study.

Figure 3

Pilot Model 1: Hierarchical Five Factor Model of Presence



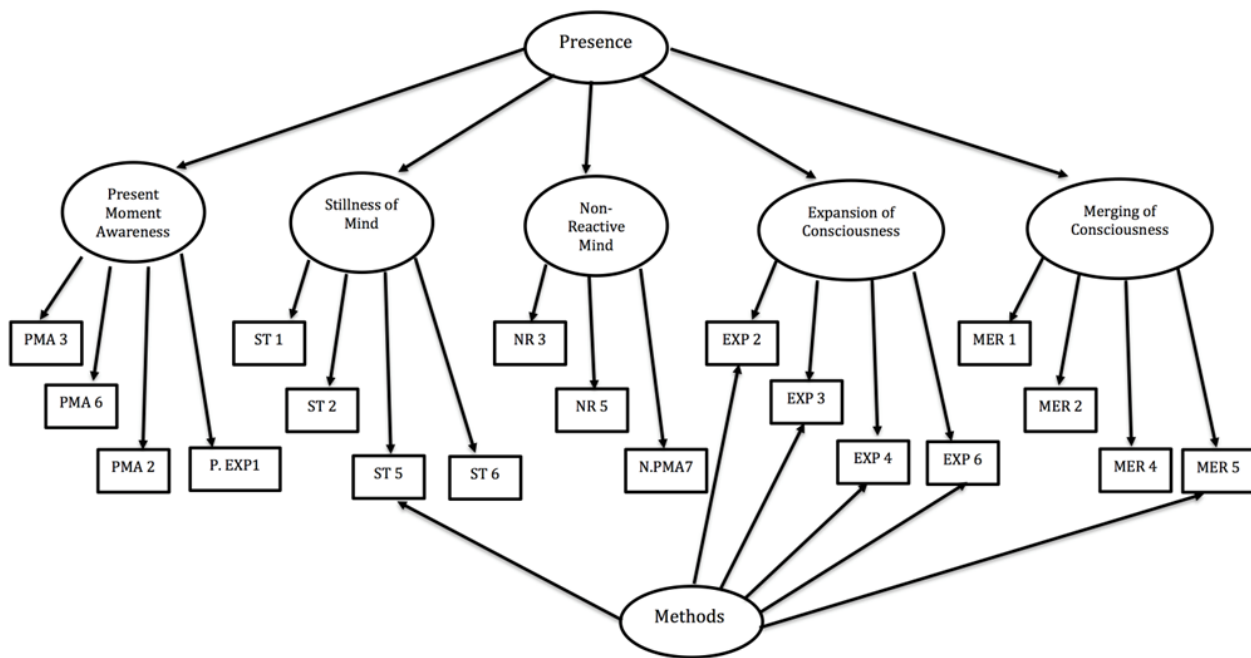
Note. See Table 5 to read the items that correspond with each item label.

A second model, Pilot Model 2, was investigated to account, in part, for the difficulty of using concrete language to describe the psychological experience of Presence. Pilot Model 2 had a methods factor that included items EXP2, EXP3, EXP4, EXP6, MER5, and ST5 (Figure 4). All of these items were suspected to be prone to varied interpretations by participants. Specifically, EXP4 included the word “consciousness,” which was interpreted differently by different

cognitive interview participants. ST5 included a two-sentence metaphor, which we suspected may be more cognitively demanding to process relative to other items. EXP2, EXP3, and EXP6 aimed to capture an experience that some cognitive interview participants had found difficult to describe with words. Additionally, several unmodelled error covariances during the initial EFA led us to consider this as an alternative model. Thus, a methods factor was created to allow us to examine whether variance in those items could be due to a source other than Presence, and if accounting for that will better allow us to measure and model Presence.

Figure 4

Pilot Model 2: Hierarchical Five Factor Model of Presence with Methods Factor



Note. See Table 5 to read the items that correspond with each item label.

Two different analyses were performed on each model: the first used robust maximum likelihood (MLR) to correct for non-normality, and the second used Weighed Least Squares

adjusted for Means and Variances (WLSMV) to correct for data being categorical rather than continuous.

Results indicated that Pilot Model 2 improved the fit compared to Pilot Model 1 for both WLSMV and MLR (see Table 6). WLSMV provided a better CFI fit than using MLR, and MLR had a better RMSEA fit than WLSMV. However, despite some of these improvements of Model 2 over Model 1, the CFI, RMSEA, or SRMR (standardized root mean squared residual) did not meet the standards for a good model fit as per the Hu and Bentler (1999) criteria (CFI > 0.95, RMSEA < 0.06, and SRMR < 0.08). Additionally, when running the analyses for Pilot Model 2 in both WLSMV and MLR and for Pilot Model 1 using MLR, a negative variance occurred for factor 4 (hypothesized to be EXP), indicating that a Heywood case occurred.

Table 6

Results from CFA Analyses of the Two Pilot Models.

Pilot Model and Analytic Method	Normal-Theory Chi-square	Robust Chi-square	Degrees of Freedom	p-value	CFI	RMSEA	SRMR
Model 1: WLSMV	548.859	528.053	147	<.001	0.860	0.111	0.109
Model 2: WLSMV	471.685	464.664	146	<.001	0.883	0.102	0.103
Model 1: MLR	492.034	405.852	147	<.001	0.742	0.091	0.114
Model 2: MLR	448.936	375.004	146	<.001	0.771	0.086	0.112

Revising the Conceptualization and Measurement of Presence

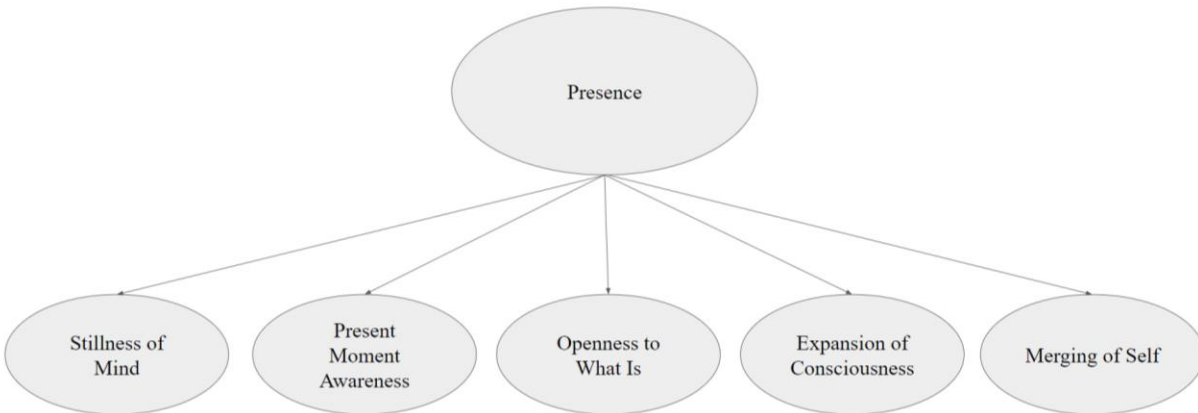
Redefining the Factors of Presence

In his book on scale development, DeVellis (1991) stated that “the boundaries of the phenomenon [or factor] must be recognized so that the content of the scale does not inadvertently drift into unintended domains” (p. 51). The findings from our pilot study suggested that the boundaries of our factors had not been sufficiently defined. The only exception to this was perhaps the items hypothesized to measure Stillness of Mind, which were well correlated with one another.

Thus, to better conceptualize the boundaries of each factor of Presence, our research team revisited the definitions of each factor. Note that two factor names were revised according to our new definitions and conceptualizations: we reconceptualized *Non-Reactive Mind* into a new, somewhat related factor, *Openness to What Is*, and renamed *Merging of Consciousness* as *Merging of Self*. Those definitions are as follows: *Stillness of Mind* occurs when discursive thinking subsides and the mind is clear, calm, and settled; *Present Moment Awareness* occurs when there is awareness of the now, of the present moment, even if – or as – one is involved in activity; *Openness to What Is* occurs when one is open, receptive, and nonjudgmental toward what is happening; *Expansion of Consciousness* occurs when one’s consciousness seems to expand beyond the confines of the body and mind; and *Merging of Self* occurs when one experiences becoming One with another entity or realm. We continued to hypothesize that Presence is a higher-order construct containing these five lower-order factors (See Figure 5).

Figure 5

Conceptual Model of the Hypothesized Five Factors of Presence



The conceptual and item revisions we made to each of these factors are described in greater detail below.

Theoretical Analysis, Item Generation, and Item Revisions

The research team engaged in what scale developers call, “theoretical analysis,” in which the content validity of the items is evaluated to ensure that each item and the larger item pool reflects the intended construct (Morgado et al., 2017). Items were shown next to the factor definition for members of the research team to evaluate. From the theoretical analysis of the Presence items, it often became apparent that the items could be revised for further improvement. Thus, this process of iterative conceptualization alternated between phases of item revision and generation and phases of theoretical analysis.

The research team reviewed the items from the first pilot study and created new items to measure each factor more completely and precisely. From this work, 80% of the Presence items subsequently administered in Studies 1 and 2 were new, meaning they were not administered in the pilot study. Table 7 shares examples of item contenders and our rationale for choosing a final item.

Table 7

Selection of Items, Earlier Similar Contender Items, and Rationale for Choosing Final Items for Studies 1-3

Final item	Examples of related item contenders	Rationale for choosing final item
My mind felt like a calm, clear lake.	My mind felt like a calm, clear lake under the sun.	This item worked well in the Pilot Study and interviewees responded to it well in cognitive interviews. Specifying “under the sun” was not necessary for the item.
There were moments when my mind felt still.	My mind felt still.	The final item allows for moments in the Presence experience in which the mind may not have felt still, rather than a more stringent statement of, “My mind felt still.”
I welcomed what was happening to me for what it was.	Whether or not I realized it, I acknowledged the moment for what it was. I recognized the experience for what it was. I was able to accept what was happening to me.	“Welcome” struck a middle ground between “acknowledge” or “recognize,” which we thought may overemphasize a cognitive evaluation, and “accepted,” which could be confused for condoning one’s experience.
My heart was open to the full experience.	My heart was open to the time and place I was in. My heart was opened to the experience. My heart opened to the experience with acceptance.	The phrase “time and place” may be too similar to items measuring Present Moment Awareness. “Acceptance” may have suggested one condoned their full experience, rather than being open to it nonjudgmentally. Including “the full experience,” rather than just “the experience,” emphasized an open stance toward the complete experience, not just certain parts of it.
I sensed at the time that I was fully alive in that moment.	I knew I was fully alive in the moment. I felt fully alive.	The final item intentionally used the word “sensed” to deemphasize a cognitive certainty (e.g., “knew) of being fully alive in the moment. The final item also emphasizes the participant sensing they were fully alive in the

	I was aware of being fully alive in that time and place.	moment <i>at the moment they were experiencing</i> . In this way, the final item emphasizes an awareness of awareness, not just immersion in the moment.
I felt a part of myself expanding outward.	I felt like I was expanding outward. I felt like my consciousness was expanding outward. I felt like a part of who I was extended outward.	“A part of myself” leaves room for interpretation for those who may have a hard time understanding the term “consciousness.” We also aimed to avoid the phrase “I felt like.”
My consciousness extended outward as if toward a horizon.	I felt like a part of me expanded out as though toward the vast blue sky.-It felt like my horizons expanded. I felt like my consciousness expanded outward as if towards the horizon.	The word “horizon” evokes imagery of an endpoint outside of oneself, but does not further constrain to where one is expanding. The word “extended” distinguishes this item from items that use the term “expanded.” We also aimed to avoid the phrase “I felt like.”
My sense of self faded as I became part of something greater.	My sense of self diminished as I became part of something greater. My feelings of self-importance diminished as I became a part of something greater.	We thought the term “diminished” may not resonate well with participants. Additionally, “feelings of self-importance” seemed to over-endorse existing feelings of self-importance as necessary for responding to this item.

The following sections review changes made to each of the factors.

Conceptual and Item Changes to Present Moment Awareness

Revisiting the Present Moment Awareness items and factor conceptualization revealed that two different ways of engaging with the present moment had been conflated: being

immersed in the present moment and being aware of the present moment. Items in the pilot study hypothesized to be in the Present Moment Awareness factor included items such as, “It seemed like my whole being was involved in the moment” and “Nothing else seemed to exist outside of the present moment.” Although these items may measure the intended construct of being aware of the present moment, upon closer examination, it was noted that these items did not clearly distinguish between being immersed in the present moment and being aware of the present moment. As an example of this, one may be immersed in the moment when playing a video game but be lost in—rather than fully aware of—the now, the present moment. Thus, we concluded these two items were not measuring solely and precisely Present Moment Awareness and instead renamed them as measuring Present Moment Immersion. We therefore sought to revise items to make sure they were not measuring immersion in the present moment.

To assist with this clarification of the team’s conceptual understanding of Present Moment Awareness, research assistants gathered accounts from traditions that distinguish between immersion in and awareness of the present moment. This literature included accounts of walking meditations, Buddhist sand mandalas, and Japanese Tea Ceremonies (Beretto, 2019; Cochrane et al., 2021; Sakuae & Reid, 2012), all of which differentiated immersion in the moment from a higher order awareness of the moment, which the team strove to capture in the refined Present Moment Awareness factor. Several new items intended to measure Present Moment Awareness were inspired from language in these literary texts, such as “I was conscious of myself experiencing the moment.” The research team did many weekly iterations until we reached consensus that all new items fit this newly refined Present Moment Awareness factor.

To empirically test whether there is a distinction between Present Moment Immersion and Present Moment Awareness, we included six items expected to measure Present Moment

Immersion in two of our three later empirical studies. We included these items with the expectation that they measured Present Moment Immersion, not Present Moment Awareness nor Presence. In other words, we expected that when analyzing these six items alongside the rest of the Present Moment Awareness items, that two factors would emerge. One factor would measure Present Moment Awareness and the other factor would measure Present Moment Immersion. If so, our plan was cut the Present Moment Immersion items from the model of Presence.

Conceptual and Item Changes to Stillness of Mind

Of the five factors examined in the pilot study, Stillness of Mind exhibited the strongest psychometric properties. Specifically, four of the six items used in the pilot study were maintained in the subsequent studies. A fifth item, “There were moments when my thoughts quieted,” was revised to capture a stronger experience of one’s conditioned thought patterns settling down or disappearing: “My mind was free from inner dialogue.” As such, our understanding of Stillness of Mind remained largely the same from the pilot study.

Conceptual and Item Changes to Non-Reactive Mind

Of the five hypothesized factors of Presence, Non-Reactive Mind underwent the greatest change at this stage in being reconceptualized as Openness to What Is. This change was spurred by poor inter-item correlations within the seven items hypothesized to measure Non-Reactive Mind. Several items, such as “I did not get caught up in my thoughts,” and “Thoughts that came up, if any, did not interfere with my experience,” exhibited fairly strong correlations with items hypothesized to measure Present Moment Awareness. Furthermore, the item “I did not judge my experience,” was most strongly correlated with items hypothesized to measure Stillness of Mind. In reexamining these items and what we had thought Non-Reactive Mind to be, we recognized

that the factor should have less emphasis judgments of one's internal experience (i.e., thoughts) and instead capture an attitude or stance toward one's experience overall.

There were several challenges to address in conceptually distinguishing Openness to What Is from Non-Reactive Mind, Stillness of Mind, and Present Moment Awareness. First, as mentioned above, we considered Openness to What Is to refer to not only one's experience of thoughts and the mind, but to the entirety of one's experience of the present moment. However, we simultaneously aimed to distinguish this factor from awareness of the present moment, as this was already expected to be measured by Present Moment Awareness. Although we could make a conceptual distinction between openness as an orientation to one's experience and awareness as simply being aware of being in the present moment, we wanted to ensure the language we used to measure each experience through our scale items was distinct. Thus, many of the items expected to measure Openness to What Is in our subsequent studies referred to "the experience" as opposed to "the present moment." Finally, our primary conceptual distinction between Openness to What Is and Stillness of Mind was that Openness to What Is did not necessitate a quieting of the mind—one could be open to experiencing the moment as it unfolds while still experiencing an inner dialogue about that experience. We generated over 150 new items over the course of revising the Non-Reactive Mind factor into the Openness to What Is factor. The final set of seven items used in subsequent studies focused on receptivity, lack of reactivity, awakening, openness, and acceptance of one's experience or one's reality.

Conceptual and Item Changes to Expansion of Consciousness

Our conceptualization of Expansion of Consciousness did not change in a fundamental way but became more specific to an expansion outward or beyond oneself. Our original items in the pilot study used terms such as "limitlessness," "infinity," and "vast space" to measure an

experience of expansion. Furthermore, pilot study items used varied terms to describe what was expanding. For example, one item referred to one's awareness ("My awareness felt limitless"), others referred to one's mind ("It was like some part of my mind that is hard to describe seemed to open up," "The experience filled my mind with a feeling of infinity," and "It felt like the experience opened up space in my mind."), and others still referred to one's consciousness ("It was like my consciousness expanded into vast space," and "It was like the door of my consciousness opened wide."). In re-specifying what we conceptualized to be Expansion of Consciousness, we instead focused our item language on consciousness and more general references to the self. Namely, two of the six items used the term consciousness ("My consciousness expanded," and "My consciousness extended outward as if toward a horizon.") and the remaining four items referred to one's whole self or a part of oneself (e.g., "I felt...", "I felt a part of my self...", "A part of me...", "The core of my being...").

Conceptual and Item Changes to Merging of Consciousness

Our main task in reconceptualizing Merging of Consciousness was to differentiate it from Expansion of Consciousness. Expansion of Consciousness can be thought of as one's experience of the self or one's consciousness expanding beyond its typical bounds, the body and mind. Merging of Consciousness can be thought of as an experience of one's self becoming one with something beyond the self, whether it be another person, living being, environment, higher power, or otherwise. Thus, both hypothesized factors can be thought of as related to the boundaries between self and other.

In revising our conceptualization of Merging of Consciousness, we chose to redefine the factor as Merging of Self. This change was in part driven by the ambiguity of the term "consciousness," as reported by cognitive interview participants. It was our hope that using the

term “self” would be more readily understood by readers and by participants reading scale items. Additionally, this change in terminology was a way to further differentiate the factor from Expansion of Consciousness. This change from ‘Consciousness’ to ‘Self’ helped guide the language used in items intended to measure this factor. For example, items in the pilot study emphasized a shift in boundaries, such as “The boundaries between myself and everything else dissolved,” and “I could not say where I ended and everything else began.” Though boundaries between the self and other remained implicit in the Merging of Self items we used in subsequent studies, these items more explicitly described an experience of merging of self with other such that boundaries were transcended. For example, items such as, “I became a part of something greater than myself,” and “I seemed to merge with something beyond myself” from the pilot study were included in subsequent studies. New items included, “I felt my self merging with everything, as though I were a wave that merged back into the ocean,” and “My sense of self faded as I became part of something greater.”

Finalizing an Item Pool

Over 400 new items or item revisions were proposed during this phase of theoretical analysis, item generation, and item revision. These items were discussed in weekly 90-minute research team meetings and the iterative process lasted for several months. Between meetings, the first and second authors and a team of research assistants reviewed notes from previous research team discussions, generated new items and alternative wordings to existing items, and asynchronously discussed strengths and weaknesses of the item pool in collaborative documents. To streamline these meetings, on a weekly basis the first author synthesized the team’s latest work in tables showing each item, whether it was brand new or was revised from a previous item, the reasons for the revision, benefits and drawbacks about the item, and provided her

personal recommendation for whether to cut, revise, or keep that item based on the group’s feedback thus far (see Table 8 for a brief example).

Table 8

A Partial Example of a Synthesis Table on Expansion of Consciousness Contender Items

Original items from last lab meeting	Last week’s comments on these items.	New revisions on items & suggested recommendations given from this week
<p>-I felt my consciousness extend into vast areas of space and time.*</p> <p>**drop time.</p>	<p>Revise or omit. Issues with several words. Into implies merging. Time implies timelessness which we decided wasn’t fundamental.</p> <p>Recall the Pilot item: It was like my consciousness expanded into vast space.</p>	<p>Omit the original. Multiple people read vast space and thought about outer space and got confused.</p> <p>Keep a new one or two below. Maybe one item with consciousness and one with sense of self to use different wording?</p> <p>[team member’s initials]: I felt like my consciousness expanded/extended from to space inside of me to a space outside of me. [new team member’s initials]: My sense of self moved from somewhere inside of me to somewhere outside of me. [new team member’s initials]: Part of my sense of self moved from somewhere inside of me to also include somewhere outside of me.</p> <p>It may be good to include a sense of self to match definition, as that hasn’t been used yet here!</p>
<p>-My awareness felt limitless.</p>	<p>Meh. We did not discuss this for long, but mentioned we should check notes from previous discussions.</p> <p>We should assess how much this item gets at the definition.</p>	<p>Omit. Worried that “awareness” maps this onto PMA too much. Also, the idea of awareness being limitless could be at odds with awareness being grounded in the here-and-now.</p>
<p>-It felt like my horizons expanded.</p> <p>-I felt I expanded into the horizon.</p> <p>-I felt like I extended outward (as if) toward the horizon.</p>	<p>Likely omit unless we want to try one with the word, horizon.</p>	<p>Keep/strong contender: <u>I felt like I extended outward as toward the horizon</u></p> <p>Having something more concrete for scale development is helpful. The idea of horizon is a universal word. It is more tangible than infinity/endlessly/limitless.</p>

Note. The content of these rows provides an accurate example of what was shared at a weekly research team meeting, but a few things in this table differ slightly from the actual table. We revised the table to make grammatical corrections, typed out shorthand abbreviations for additional context, and replaced actual team member’s initials with the phrase [team member’s initial].

These tables and recommendations served as starting point for team discussion, during which we would strive to reach a consensus on a particular set of items and which items needed to be revised or generated for the upcoming week. Eventually, the team agreed on 32 items, which were subsequently administered in Studies 1 and 2 (see Table 9).

Table 9

Presence Items Administered in Study 1 and Study 2 with corresponding Item Labels

Item	Item Label
My mind felt like a calm, clear lake.	ST1
If you let a bucket of sandy water sit, the water becomes clear as the sand settles. It felt like my mind experienced something like that.	ST2
There were moments when my mind felt still.	ST3
My mind was free from inner dialogue.	ST4
My mind felt settled.	ST5
My whole being was involved in the moment.	PM.i1
Nothing seemed to exist outside of the present moment.	PM.i2
I felt fully immersed in the moment.	PM.i3
Whatever I experienced brought me into the present moment.	PM.1
I was simply in the now, not preoccupied with the past or future.	PM.2
I wasn’t thinking about what would happen next.	PM.3
I sensed at the time that I was fully alive in that moment.	PMA1
Even as I was immersed in the experienced, there was a part of me that was aware of it.	PMA2
I was immersed in the experience without getting lost in it.	PMA3
It was like I was aware of everything, moment by moment.	PMA4
I was conscious of myself experiencing the moment.	PMA5
I welcomed what was happening to me for what it was.	OP1
My heart was open to the full experience.	OP2
I found myself receptive to the experience as it unfolded.	OP3
My lack of judgment toward the experience helped me be more open to it.	OP4
I felt that I had opened up to a reality beyond my normal life.	OP5
I felt that I had awakened to a reality different from my everyday experience.	OP6

I accepted the reality of the experience for what it was.	OP7
I felt a part of myself expanding outward.	EXP1
My consciousness extended outward as if toward a horizon.	EXP2
My consciousness expanded.	EXP3
I felt limitless.	EXP4
The core of my being radiated outward.	EXP5
A part of me felt boundless.	EXP6
I felt a deep sense of oneness.	MER1
I became a part of something greater than myself.	MER2
My sense of self faded as I became part of something greater.	MER3
I seemed to merge with something beyond myself.	MER4
I felt my self merging with everything, as though I were a wave that merged back into the ocean.	MER5
I felt a part of it all.	MER6

Note. ST= Stillness of Mind; PM.i = Present Moment Immersion; PM. = Present Moment-Related; PMA = Present Moment Awareness; OP = Openness to What Is; EXP = Expansion of Consciousness; MER = Merging of Self. Each item’s label shown in column 2 was used throughout Studies 1-3; item labels did not change after this.

Prompt Revisions

In addition to revising the items, the team also revised the Presence prompt. When creating the prompt used in the first pilot study, we sought to construct a prompt which would elicit a time in an individual’s life in which they had strongly experienced Presence. This was a purposeful choice. We suspected that relatively strong Presence experiences tend to be experienced somewhat infrequently, especially during the unusually challenging time at which we conducted our pilot study (spring 2021 during the COVID-19 pandemic); thus, we aimed to write a prompt for the pilot study that would help participants think of a time when they were deeply experiencing Presence. We feared too many people might not have a Presence experience to write about, so we used strong language.

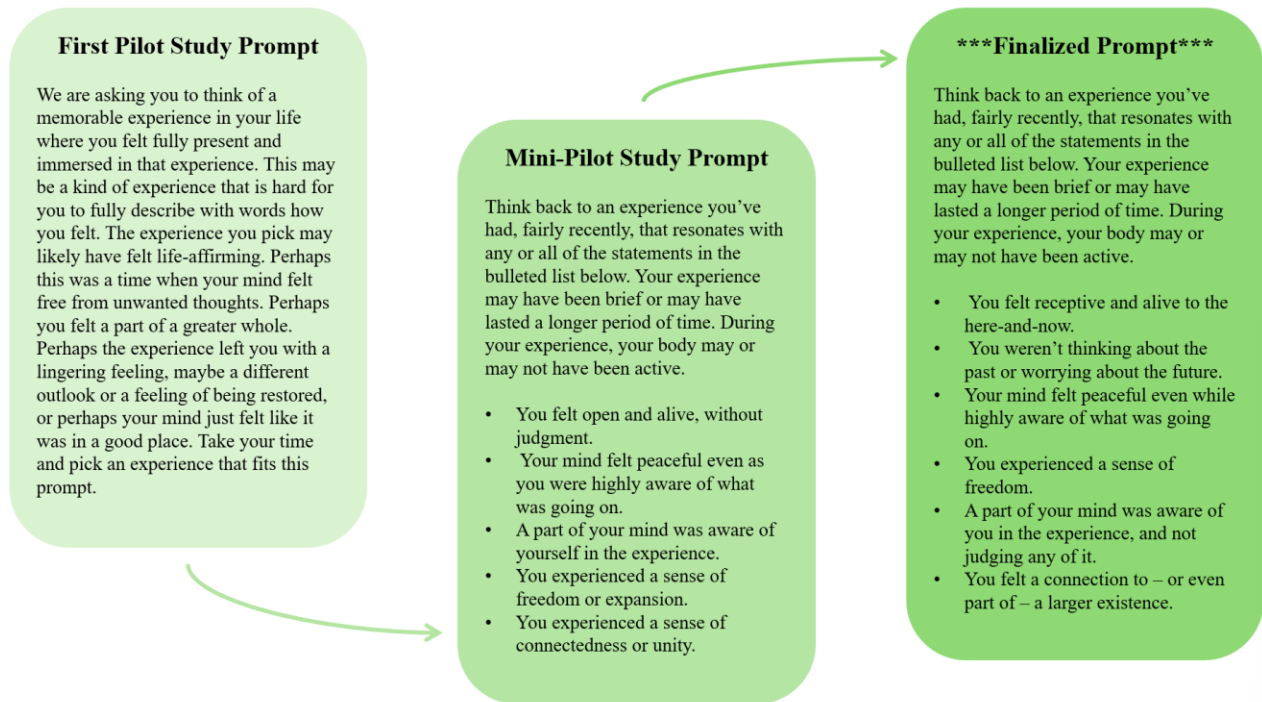
However, upon examining the participants’ written accounts of their experiences from the first pilot study, our research team suspected that the majority may have been describing strong or even profound experiences of Presence. This may have been one reason why the item

responses in the pilot study were highly skewed, as disagreement with the items was rare. Unfortunately, the high skew in the pilot study data limited our ability to detect correlations among items. In turn, this jeopardized our ability to measure Presence, since factor analysis directly draws upon the covariance matrix of the item set.

Thus, we revised the Presence written prompt in two different rounds. The three different prompts piloted are shown in Figure 6. The goal of all prompt revisions was to elicit a range of very low to very strong Presence experiences so that participants' responses to the Presence items would have a more balanced, less skewed, distribution. We also aimed to capture each of the factors when considering all of the bullet points together. We often drew on language used by cognitive interview participants or accounts of Presence from our literature, while omitting key terms that appear in our Presence Scale items so as not to unduly prime participants.

Figure 6

Evolution of Presence Prompts Administered to Participants



Note. The finalized prompt was used in Studies 1 – 3.

All versions of the prompt were followed by three open-ended questions to solicit participants' brief written accounts of their experiences. This approach of having participants write about their experience aligns with prior studies measuring related states such as awe (Yaden et al., 2019) and flow (Jackson & Marsh, 1996). In our case, these three qualitative questions served several purposes. First, instructing participants to write about their experience ensured that the participants did in fact choose a specific experience after reading our prompt. On the few occasions when a participant provided a nonsensical response, we omitted it from further analysis. Second, we suspected that the act of writing about their experience would help participants remember their experience and keep it in mind when completing the study; thus, hopefully making it easier for them to answer the Presence items more quickly and accurately.

Third, we sought to gather a body of current-day accounts of Presence in participants' own language (see [Appendix C](#) for a selection of participants' experiences). This allowed us to continue to deepen our understanding of Presence and the many ways in which it can occur and be experienced. Given the challenges inherent in retrospective self-report measurement (Schwarz, 2007), we hoped that the brief writing exercise would enhance the credibility and quality of our data, along with the added benefits of being able to read about many life-affirming Presence experiences.

In the pilot study, experience recency was not specified (see left box in Figure 6), and results indicated that nearly one third of participants selected an experience from over five years ago. Although in the qualitative data, many participants described in detail what they were doing and how they felt during these old experiences, the accuracy of self-report data from these old experiences may have been compromised due to issues of memory error (Tourangeau, 1999). However, in order to have variability such that some people would select strong Presence experiences, we did not want to ask participants to respond based on their current state or to pick an experience earlier that day. We felt this would not be appropriate during the COVID-19 pandemic when many people were struggling. Thus, the prompt was revised to specify that participants should pick an experience that occurred "fairly recently" to prevent participants from selecting experiences that occurred many years ago, even if it may have been the strongest Presence experiences of their lives (see middle and right boxes of Figure 6).

In the process of creating the prompt, we conducted a mini-pilot study testing the prompt along with the Presence items administered in Study 1. Following the same approach of our pilot study and subsequent Studies 1-3, college student participants ($N = 91$) were shown the revised prompt, asked to select an experience based on the prompt, shown the revised prompt again with

a series of qualitative questions, and then asked to complete the 32 Presence items which were to be administered in the upcoming Studies 1 and 2. Uniquely to this mini-pilot study, participants responded to feedback questions about the prompt after completing the Presence Scale,.

The first feedback question assessed whether participants remembered their experience while completing the Presence Scale: “Were you able to keep your experience in mind while responding to all of the statements?” One reason for this question was a concern raised within the research team that the act of filling out the Presence Scale could be distracting for participants such that they might even forget the experience they had chosen for this study. Furthermore, we were concerned some participants might think of multiple experiences when reading the prompt and have difficulty keeping their single selected experience in mind while responding to the items. Ninety-five percent of participants answered “yes,” indicating that the vast majority of participants responded to the items with their Presence experience in mind.

The question “How easy was it for you to choose a single experience?” was asked to better understand how many experiences came to mind from the prompt and the difficulties participants may face in selecting from those experiences. Nine percent of participants reported, “I had a lot of difficulty thinking of an experience,” and all but one of these participants also later reported that they had trouble understanding the prompt. The rest of the options and response frequencies were as follows: “One experience came to mind and that's what I chose” (52%); “A few experiences came to mind and I was easily able to choose one” (29%); “A few experiences came to mind and I had difficulty choosing one” (7%); “A lot of experiences came to mind and I had difficulty choosing one” (4%). All of these participants were able to select one experience, as was seen in their qualitative writing portion. We interpreted these findings as promising in that over 80% of participants seemed to have readily been able to select an

experience that resonated with the prompt. This suggested to us that Presence experiences that aligned with this prompt may be experienced somewhat infrequently (i.e., only 4% reported that a lot of experience came to mind and they had difficulty choosing one) but that the vast majority of participants could think of an experience that resonated with the prompt.

To assess how difficult it was to understand the prompt, participants were asked “Did you have trouble understanding what the prompt was asking you to do?” Eighty percent responded “No,” while 20% responded “Yes.” We considered this to be an adequate rate of understanding but included a similar feedback question in Study 1 to assess understanding of our final prompt used in Study 1, with the hope that our subsequent revisions improved the prompt’s clarity.

Overall, we considered this participant feedback to be a promising indicator of the clarity and relevance of our prompt in guiding participants to select an experience. Partly for conceptual reasons and partly for clarity, the bulleted statements in the prompt from the mini-pilot study were further revised before Study 1. One specific change was adding the bullet point, “You weren’t thinking about the past or worrying about the future” (see right box of Figure 6). Although individuals reporting strong Presence experiences might endorse this statement, many individuals could endorse this statement but only be experiencing a modest degree of Presence. If a participant was struggling to pick an experience, we hoped that this statement could allow more people to share experiences with varying degrees of Presence.

In the next round of data collection (Study 1), we asked a subset of participants (N = 95) receiving course credit “Did you understand the prompt,” and 99% responded “Yes”. Additionally, 95% of participants responded “Yes” to the question “Were you able to keep your experience in mind while responding to all of the statements [Presence items]?” These improved

rates of understanding gave us confidence to proceed with the Study 1 prompt in subsequent studies.

Item Rating Scale Revisions

The 1-7 scale in the first pilot study was originally on a continuum from *Strongly disagree* to *Strongly agree*. An assumption of factor analysis is that the data follow a multivariate Normal distribution. Therefore, we needed a prompt that would lead many participants to *Neither agree nor disagree* with the items, while also eliciting some disagreement with the items from participants (representing experiences that were weak Presence experiences or not Presence at all) and some agreement (representing strong Presence experiences). Our pilot study prompt elicited highly skewed responses to our initial Presence items. After many attempted revisions to our prompt, this problem of achieving a balanced distribution proved nearly impossible to solve through the prompt alone.

The research team came to an alternative way to address the issue of skewed item responses: we changed our response format to anchor moderate, rather than weak, Presence experiences in the middle of the response options. Instead of a 1-7 rating scale from *Strongly disagree* to *Strongly agree*, we created a new 1-7 rating scale: 1 (*Not at all*), 2 (*Very slightly*), 3 (*A little*), 4 (*Moderately*), 5 (*Quite a bit*), 6 (*Very much*) and 7 (*Completely*). These response options were designed to measure the degree to which one experienced Presence, as opposed to over half of the response options (*Strongly disagree*, *Disagree*, *Somewhat disagree*, and *Neither agree nor disagree*) indicating the participant may not have been experiencing the experience described by the item. Thus, we predicted that we would observe greater variability in participants' responses with the new response format (*Not at all* to *Completely*). It is a fair prediction that changing our response format could produce advantageous changes in item

responses and distribution as Ackerman et al. (2016) have shown that changing response format affects how participants interpret and respond to items.

This modification in item response format, as well as the prompt itself, allowed the team to shift the goal of the prompt. We crafted a new prompt that drew on all factors of Presence, thereby encouraging people to select, on average, a moderate Presence experience, while also allowing room for some people to share deep, meaningful Presence experiences.

Preparing a Validity Argument for the Presence Scale

Our goal in creating the Presence Scale was and continues to be to have a self-report measure from which we can draw inferences about the degree to which a person experienced Presence during a recalled experience. Our task was therefore to generate evidence for the validity of this inference (Kane, 2006; Lane, 2014). The Presence Scale could eventually be extended to use in experimental or ecological momentary assessment research; however, further validity evidence would be needed to establish its validity in these settings.

The main goal we aim to draw from the Presence Scale is that it measures Presence and not other related constructs. Our literature review, cognitive interviews, and our theoretical analysis and reconceptualization work following our pilot study all support that our items measure the experience of Presence. Though not yet analyzed systematically, the qualitative accounts of participants' experiences further suggest that our prompt elicits recalled Presence experiences. However, this evidence alone is insufficient to argue that the Presence Scale does not also measure some other similar construct or constructs.

Many new constructs inadvertently are re-inventing older constructs with a new label, or inappropriate labels are used to describe what construct is being measured. These mistakes have been characterized as the jingle-jangle fallacy, and it is imperative that researchers avoid

committing this fallacy (Marsh, 1994). Thus, we sought to provide ample initial validity evidence for the newly identified construct of Presence to establish it as distinct from related constructs.

To ensure our items were not measuring constructs related to Presence, we included additional measures in our subsequent studies to provide convergent and discriminant validity evidence. An overview of these constructs and their hypothesized association with Presence is presented in Table 10. The following sections review each of these constructs, our reasoning for their selection, and our hypotheses regarding their association with Presence.

Table 10

Hypothesized Associations Between Presence and Other Constructs

Construct	Construct Definition	Hypothesized Association with Presence
Mindfulness	“Broadly conceptualized, mindfulness has been described as a non-elaborative, non-judgmental, present-centered awareness in which each thought, feeling, or sensation that arises in the attentional field is acknowledged and accepted as it is (Kabat-Zinn, 1990; Shapiro & Schwartz, 1999; Segal et al., 2002)” (p. 1447, Lau et al., 2006).	Mindfulness is hypothesized to be positively associated with but distinct from Presence.
Flow	“When in flow, a person becomes totally involved in an activity and experiences a number of positive experiential characteristics, including freedom from self-consciousness and great enjoyment of the process. Flow is an intrinsically enjoyable state and is accompanied by an order in consciousness whereby the person experiences clarity of goals and knowledge of performance, complete concentration, feelings of control, and feelings of being totally in tune with the performance.” (p. 18, Jackson & Marsh, 1996).	Flow is hypothesized to be positively associated with but distinct from Presence.
Ego-Dissolution	Ego-dissolution can be defined as a “disruption of ego boundaries, which results in the blurring of the distinction between self-representation and object-	Ego-Dissolution is hypothesized to be

	representation”. This allows one to become whole with their surroundings. (pg. 2, Nour et al., 2016).	positively associated with but distinct from Presence.
Nondual Awareness	“A state of consciousness that rests in the background of all conscious experiencing -- a background field of awareness that is unified, immutable, and empty of mental content, yet retains a quality of cognizant bliss.” (pg. 1625-1626, Hanley et al., 2018; paraphrased from Josipovic, 2014).	Nondual Awareness is hypothesized to be positively associated with but distinct from Presence.
Rumination	“Depressive rumination is a particularly maladaptive form of self-focus (Mor and Winquist 2002; Nolen-Hoeksema et al. 2008), which involves repetitively focusing attention on the causes and implications of one’s negative mood (Nolen-Hoeksema 1991)” (p. 447, Marchetti et al., 2018).	Rumination is hypothesized to have a modest negative association with Presence. Presence is not simply the opposite of Rumination.
Self-Reflection	Self-reflection is defined as “the inspection and evaluation of one's thoughts, feelings, and behavior” (Grant et al., 2002, p. 821).	It is hypothesized that there will be no association or very modest positive association between Self-Reflection and Presence.
Insight	Insight is defined as “the clarity of understanding of one's thoughts, feelings, and behavior” (Grant et al., 2002, p. 821).	It is hypothesized that there will be no association or very modest positive association between Insight and Presence.

Note. Some constructs, in particular Mindfulness, have been defined inconsistently (Altgassen et al., 2024). In this table, construct definitions are purposefully obtained and quoted from papers that developed scales on these measures that we administered.

Presence and Mindfulness

Mindfulness is most commonly defined as “moment-to-moment, non-judgmental awareness, cultivated by paying attention in a specific way, that is, in the present moment, and as non-reactively, as non-judgmentally, and as openheartedly as possible” (Kabat-Zinn, 2015, p. 1481). However, as noted by Altgassen and colleagues (2024), there are many varied definitions of mindfulness, including perspectives that consider mindfulness to be a practice (i.e., something one *does*), some that treat mindfulness as a trait, and others that treat mindfulness as a

psychological state. Regardless, mindfulness is typically characterized by an open, non-judgmental orientation to one's present experience (Kabat-Zinn, 2015; Lau et al., 2006).

Throughout our conceptual development of Presence, it was clear that experiences of Presence share features with mindfulness. For example, one of our first four potential factors of Presence prior to conducting our literature review was "open non-conditioned thinking." This potential factor reflects the non-reactive, non-judgmental, open attention characteristic of mindfulness. Later, our literature review revealed themes such as "present moment awareness" and "non-judgmental mind." Our hypothesized Present Moment Awareness and Openness to What Is factors, informed by evidence from our pilot study, similarly reflect defining characteristics of mindfulness, such as being "conscious of [oneself] experiencing the moment". However, Present Moment Awareness is also measured by items not clearly characteristic of mindfulness, such as sensing that one is "fully alive in that moment". Similarly, Openness to What Is included items distinct from mindfulness, such as the item "My heart was open to the full experience."

Nevertheless, we also hypothesized Presence is characterized by three other factors that are less central to mindfulness: Stillness of Mind, Expansion of Consciousness, and Merging of Self. Mindfulness practices and states center one's attention on one's internal and external experience of the present moment. However, a state of mindfulness does not inherently quiet the mind; in fact, thoughts may likely continue to emerge and pass through the mind, provided one maintains an open, non-judgmental orientation to those thoughts. One *may* experience a quieting or stilling of the mind, but we argue this is more likely a consequence of mindfulness than characteristic of a state of mindfulness in the way it is characteristic of Presence. Furthermore, mindfulness grounds one in the present moment, rather than spurring a sense of expansion to or

merging with that which is beyond the self. Therefore, our Expansion of Consciousness and Merging of Self factors clearly distinguish Presence from mindfulness.

Considering these theoretical similarities and differences between mindfulness and Presence, we included a measure of mindfulness in our subsequent empirical studies. We selected the Toronto Mindfulness Scale (Lau et al., 2006; see [Appendix D](#)) for several reasons. First, it demonstrated strong face validity for the experience of state mindfulness we wished to measure. Second, the measure had been subject to some psychometric validation efforts with populations similar to those we expected to use the Presence Scale with. Third, the Toronto Mindfulness Scale measures *state* mindfulness, as opposed to trait mindfulness, which is the focus of many other self-report measures of mindfulness (Miller et al., 2025). We were interested in whether the Presence Scale would differentiate experiences of Presence from experiences of state mindfulness, rather than from a trait of mindfulness.

The Toronto Mindfulness Scale is composed of two subscales: curiosity and decentering. Lau and colleagues (2006) define curiosity as “an attitude of wanting to learn more about one’s experiences,” and decentering as “a shift from identifying personally with thoughts and feelings to relating one’s experience in a wider field of awareness” (pp. 1460-1461). We expected that both factors would exhibit a moderate positive correlation with Presence, indicating that stronger Presence experiences share some similarities with experiences of state mindfulness, yet that Presence and mindfulness are distinct.

Presence and Flow

Flow is as an optimal state of consciousness first characterized by Csikszentmihalyi (1975, 1990, 2008) but since studied at length by other researchers. Flow is characterized by nine features: a balance of challenge to one’s skills, a merging of action and awareness, clearly

defined goals, unambiguous feedback, total concentration on the task at hand, a sense of control, a loss of self-consciousness, a transformation of one's perception of time, and autotelic experience (Csikszentmihalyi, 1990, 2008).

Several of these factors of flow are closely related to hypothesized factors of Presence and even influenced our early conceptualization of Presence. For example, themes identified in our review of literary accounts of Presence included *dissolving sense of time*, *diminished/dissolving self-concept/sense of self/ego*, and even *merging of action and awareness*, all of which reflected (if not drew directly upon) factors of Flow. Even as our conceptualization of Presence evolved, certain aspects of flow are echoed in Presence. Specifically, merging of action and awareness is characterized by intense involvement in the moment, so much so that one's actions emerge almost automatically and one's self is inseparable from one's actions (Jackson & Marsh, 1996). This factor of flow is reflected in our factors of Present Moment Awareness and Merging of Self, factors that are respectively defined by one's involvement in and awareness of the present moment, and a sense of merging with something beyond oneself, which could include one's own actions. Items such as "I sensed at the time that I was fully alive in that moment" (PMA1), and "My sense of self faded as I became a part of something greater" (MER3), reflect the similarities between their respective factors merging of action and awareness. Finally, the autotelic experience of flow is reflected in the life-affirming characterization of Presence, as both constructs are intrinsically rewarding, even if not necessarily positive in emotional valence.

Although Presence and flow exhibit several similarities, one of the fundamental differences between these constructs lies in their experiential nature. Flow is characterized by deep immersion in an activity, whether it be athletic performance, artistic performance or other

creative endeavors, religious traditions, or intellectual pursuits. Much of the research on flow has pointed to this state as a driver of peak performance, regardless of context (Csikszentmihalyi & Csikszentmihalyi, 1988; Fullagar & Kelloway, 2009). In contrast, while Presence in some sense can also be experienced as immersive, it differs in that this immersion is not so much activity-driven, but resting, or witnessing: Being, not doing. For instance, consider the experience of climbing a mountain: the intense focus and absorption in the climb itself can exemplify flow. However, if one pauses, turns to view the vast expanse below, and in that moment experiences a cessation of activity and thought, while entering a state of conscious awareness and “being” in the moment – that epitomizes Presence. This distinction is crucial in understanding the nuanced yet significant differences between these two psychological states (see [Conceptual and Item Changes to Present Moment Awareness](#) for more discussion of immersion vs. awareness).

These similarities between our conceptualization of Presence and the construct of flow led us to include a measure of flow in our later empirical studies. We selected the most widely used measure of flow, the Flow State Scale (Jackson & Marsh, 1996; see [Appendix E](#)). The Flow State Scale is made up of nine factors, one for each of the core characteristics of Flow as described by Csikszentmihalyi (1990). This measure was developed by asking participants to reflect on an experience in sports in which they “were totally absorbed in what you were doing, and which was very enjoyable” (Jackson & Marsh, 1996, p. 22), similar to our strategy of asking participants to recall a previous experience when completing our scale items. Since its creation, researchers have used the Flow State Scale in non-sports contexts (e.g., Sheldon et al., 2015; Wiebe et al., 2014). Several different latent variable models were tested for this scale, including a hierarchical model with nine lower-order factors and a non-hierarchical nine factor model. In their original paper, these two models appear to be the statistically strongest of tested models;

however, both models approached but did not meet Hu and Bentler (1999)'s criteria for adequate model fit. Jackson and Marsh (1996) suggested that researchers use the non-hierarchical model with nine lower-order factors.

We hypothesized flow would exhibit a modest positive correlation with Presence, indicating that stronger Presence experiences have some similarity to the experience of flow but that Presence is distinct from flow. Given this, all subsequent analyses of the Flow State Scale used the hierarchical nine-factor model.

Presence and Ego-Dissolution

Ego-dissolution can be defined as a distortion of one's sense of "self" or "ego" in which the boundaries between the self and other dissolve or are otherwise disrupted (Nour et al., 2016). Experiences of ego-dissolution have been documented and researched primarily in the context of substance use, especially psychedelics (Leary et al., 1992; Mason et al., 2020). Efforts to characterize these experiences in the field of psychology stretch back to James' study of "mystical experiences" and Freud's interest in the "oceanic feeling" (Freud, 1930; James, 1902).

Ego-dissolution is most closely related to our hypothesized factors of Expansion of Consciousness and Merging of Self. We expected that an expansion of consciousness may be facilitated by some distortion of the boundaries between self and other, such that one's sense of self transcends these previously perceived boundaries. Similarly, a merging of oneself with another being or entity may in itself distort the boundaries between self and other. These factors reflect the potentially self-transcendent qualities of both Presence and ego-dissolution. However, the other three hypothesized factors of Presence do not appear characteristic of ego-dissolution experiences. While ego dissolution experiences are most often described in specific contexts such as drug use (Kałużna et al., 2022) or near-death experiences (Martial et al., 2021), we

propose that Presence can be experienced not only in these extremes of the human experience but also in everyday moments.

Given these similarities, it was imperative that we empirically assess whether Presence can be distinguished from ego-dissolution. We selected Nour and colleagues' (2016) 8-item Ego Dissolution Inventory to assess this validity question (see [Appendix F](#)). The Ego Dissolution Inventory was developed in the context of drug use and, similar to the Flow State Scale, asked participants to complete the scale based on a recalled experiences (in this case, a drug-related experience). Since its initial publication, the Ego Dissolution Inventory has been administered in studies unrelated to psychedelic or other drug experiences (Laird et al., 2021; Martial et al., 2021). We expected that ego dissolution would exhibit a moderate positive correlation with Presence, indicating that stronger Presence experiences share some similarities with experiences of ego dissolution, yet that the constructs are distinct.

Presence and Nondual Awareness

Nondual awareness is a state of consciousness without differentiation between subject and object; it is “consciousness as such,” the unmodified and unmodifiable consciousness without content (Josipovic, 2019, 2021). Nondual awareness has a long history in Asian philosophical and contemplative traditions, such as Tibetan Buddhism (Josipovic, 2014), Advaita Vedanta (Rao, 2005), and Taoism (Tzu, 1977). This “consciousness as such” has been likened to a mirror: it is unchanged by what it reflects or the amount of light shed on it, instead simply reflecting phenomena (Josipovic & Miskovic, 2020).

The relationship between Presence and nondual awareness may differ depending on one's perspective on nondual awareness. The immutable properties of nondual awareness can in one sense be said to make the experience of Presence possible, just as a mirror makes possible the

reflection of an image. From this perspective, nondual awareness is the space within which Presence emerges (Josipovic & Miskovic, 2020). However, accounts of the *experience* of nondual awareness have characterized it as a state of clear awareness without other content (Josipovic & Miskovic, 2020) or, in some cases, a state of self-transcendence (Hanley et al., 2018). Descriptions of the phenomenology of nondual awareness are argued to fall short due to the inherent ineffability of nonduality, as well as the dualities inherent to language (Krägeloh, 2019). This being said, we expect that experiences—or at least approximations of the experience—of nondual awareness, have considerable overlap with Presence. The quieting of the mind characteristic of Stillness of Mind may be similar to the receding sense of self that can emerge from mindfulness practices that foster nondual awareness (Josipovic & Miskovic, 2020). Furthermore, Present Moment Awareness is similar to the pure awareness of awareness characteristic of nondual awareness (Raffone & Srinivasan, 2009). Finally, Expansion of Consciousness and Merging of Self both have the potential to represent a dissolution of subject-object boundaries, as is found in nondual awareness. Given these similarities between nondual awareness and Presence, we saw it as imperative to empirically investigate the relationship between the experience of Presence and a state of nondual awareness, despite the limitations inherent to measuring nondual awareness.

To the best of our knowledge, at the time of our studies and still at the time of this writing, only one self-report measure of a state of nondual awareness exists: the Nondual Awareness Dimensional Assessment (NADA; Hanley et al., 2018). The NADA was initially developed as a 13-item measure assessing the degree to which participants had ever experienced nondual awareness (the Nondual Awareness Dimensional Assessment–Trait; NADA-T). This measure was developed using an item pool derived from existing measures of related constructs,

including meditative experiences and ego dissolution. The NADA-T established nondual awareness as a two-dimensional construct composed of self-transcendence and bliss.

However, our interest was in measuring the extent to which participants experienced a *state* of nondual awareness concurrent with their experience of Presence. The NADA-T was therefore inappropriate for our purposes because it measures the extent to which one has *ever* experienced nondual awareness, with items such as “I have had an experience in which I felt myself to be absorbed as one with all things,” and “I have experienced all notion of self and identity dissolve away.” Rather than the NADA-T, we used Hanley and colleagues’ (2018) brief measure of nondual *states* of awareness (the NADA-S; Appendix G), adapted from the NADA-T. Their initial validation of the NADA-S established two versions of the NADA-S, each with two items measuring self-transcendence and a single item measuring bliss, to which participants respond on a 10-point scale from *Not at all* (1) to *Very much* (10). Notably, the NADA-S was not subjected to the same degree of psychometric validation as the NADA-T: a total of only 58 participants completed two versions of the NADA-S to establish the sensitivity of the measure to changes in nondual awareness following a mindfulness intervention (versus an active attention control condition). We selected the second of Hanley and colleagues’ two NADA-S scales based on the face validity of its three items (see [Appendix G](#)).

Of all of the related constructs, we expected nondual awareness was most closely related to Presence. Therefore, we expected a moderately high positive correlation between Presence and nondual awareness.

Presence and Rumination

We expected a modest negative correlation between rumination and Presence, as the two constructs, while in tension, are not strict opposites. Rumination involves repetitive, self-

oriented, and negative thought patterns, typically focused on the past (in contrast to worry) that perpetuate distress without providing resolution (Nolen-Hoeksema et al., 2008). Presence, in contrast, is defined by the absence of thought, but can coexist with it. By analogy, a person may see a diamond encrusted with rock and smeared with mud, perceiving the diamond as a mixture of these materials. But just as the diamond remains unaltered by the rock and mud, so too Presence remains untainted by thoughts that may appear to be entwined with it.

This latter point is parsimonious with over 2,500 years of ontological cross-cultural literature, where Presence, or something like Presence as it has been articulated through the ages, is deeply situated in relation to thought, and that that relationship is to no-thought, not partial thought, or reduced or diminished thought. As Lao Tzu (1977) said over 2,500 years ago in the very first sentence of what has become the *Tao Te Ching*: “The Tao that can be told [thought] is not the Eternal Tao.” Or consider that in the Rinzai Zen tradition, one of the foundational Koans is “What is Mu?” – where Mu translates roughly as “no” or “nothingness.” The answer to the question is not intellectual (Ford & Blacker, 2011). It is in this way that Presence is said to transcend thought-based processes.

However, that said, Presence can redirect thought-based processes. This is evident in mindfulness practices, where a nonjudgmental quiet awareness (Presence) observes mental activity without being consumed by it. Can individuals remain in a state of Presence while witnessing ruminative thoughts as passing phenomena? In principle, to an extent, yes. Yet, as ruminative activity intensifies, the mental focus shifts away from Presence, creating the experience of being overwhelmed by thought.

In short, while rumination and Presence are not strict opposites, they influence awareness in different directions, which explains our expected low negative correlation.

To measure rumination, we selected the Brief State Rumination Inventory (BSRI; Marchetti et al., 2018; [Appendix H](#)). To the best of our knowledge, at the time of our studies and still at the time of this writing, the BSRI is the only self-report measure of *state* rumination that has been subjected to rigorous psychometric validation. Though there are several measures of *trait* rumination. The BSRI measures rumination as a unidimensional construct with no lower order factors. Moreover, Marchetti and colleagues demonstrated the BRSI is sensitive to a rumination induction and exhibits moderate correlations in the hypothesized directions with anxiety, depression, stress, and negative and positive affect.

Presence and Self-Reflection and Insight

Another proposition we wished to empirically test was that Presence can be experienced by most people; that is, the experience of Presence, or the reporting of a Presence experience, is not dependent upon a certain degree of self-reflection or personal insight. Self-reflection can be thought of as “the inspection and evaluation of one’s thoughts, feelings, and behavior,” and insight has been defined as “the clarity of understanding of one’s thoughts, feelings, and behavior” (Grant et al., 2002, p. 821). Unlike the other constructs we planned to measure to prepare a validity argument for the Presence Scale, self-reflection and insight do not necessarily share features in and of themselves with Presence. Even still, it is very important to include constructs like these when assessing the validity of a new measure to show that these constructs are not highly interrelated (Hodson, 2021).

As mentioned above, the purpose for including self-reflection and insight in our later studies was to test whether these stable individual differences were associated with reporting strong Presence experiences. We selected the Self-Reflection and Insight Scale (SRIS; Grant et al., 2002; [Appendix I](#)) to measure these two constructs. The SRIS is a 20-item measure in which

participants report on their general tendencies related to self-reflection and insight, assessed with two subscales. We expected that Presence would have a low correlation with both self-reflection and insight. If this hypothesis were supported, this would suggest that those with greater self-reflection and/or insight tend to, on average, report slightly stronger Presence experiences. However, as noted above, we expected this correlation would be weak. Furthermore, we expected that the association between self-reflection and insight and Presence is likely due to those with greater self-reflection and insight having an easier time recalling, reflecting on, and reporting on experiences of Presence. We do not expect that self-reflection and/or insight are related to one's *capacity* to experience a high degree of Presence. However, we were unable to empirically disentangle one's capacity to experience Presence from one's reporting of an experience of Presence due to the inherent limitations of self-report measures.

Presence and Facets of Personality

The final validity proposition we wished to test was that our Presence Scale did not measure a facet of personality. In other words, we wanted to ensure we were not committing a jingle-jangle fallacy with one or more personality traits, as has been found for other measures of new constructs (e.g., Credé et al., 2017).

To assess the association between Presence and personality, we selected the Big Five Inventory (BFI; John et al., 1991, 2008; [Appendix J](#)). The BFI is a 44-item measure of the “Big Five” facets of personality: extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience. While there are many measures of the “Big Five” personality traits, we selected the BFI for its relative brevity, as some other measures of personality consist of hundreds of items. Participants report on their degree of agreement with short phrases on a scale from *Disagree strongly* (1) to *Agree strongly* (5).

It would be reasonable to expect that personality traits would be differently associated with Presence. Therefore, from our perspective, small to moderate correlations between personality traits and Presence would not be cause for concern. However, we did not have a hypothesis as to whether any specific personality traits would be more strongly correlated with Presence than others. If any personality traits exhibited strong correlations with Presence, that would be reason to suspect we had committed a jingle-jangle fallacy.

We were most interested in examining the correlation between our Openness to What Is factor and the personality trait of Openness to Experience. Both constructs capture some degree of curiosity about one's experience and, more evidently, have similar names. Yet we expected these factors of their respective scales to empirically differentiate because of the emphasis on creativity, spontaneity, and intellectual curiosity in Openness to Experience. In contrast, our factor of Openness to What Is emphasizes an open, curious, non-judgmental stance toward one's immediate experience. Thus, we expected any correlations between the factors to be positive but small.

Overview of Major Empirical Studies

Following the extensive pilot work described above, our revisions to the conceptual model of Presence, the prompt, and the item rating scale, and identifying important measures for building evidence for the validity of the Presence Scale, we conducted three large studies that led us to a final Presence Scale. Study 1 was our first large study with an item pool of 35 potential Presence Scale items. This study was conducted with a convenience sample of college students to explore the factor structure of Presence and conduct exploratory analyses of the associations between Presence and the constructs reviewed above. Study 2 employed the same item pool as Study 1 with a goal of replicating the factor structure observed in Study 1 with a national sample.

These studies were jointly used to guide decision making on which items to cut from and include in the Presence Scale. Study 3 assessed the final 14 items and conceptual model that had performed best in Studies 1 and 2 in a second and larger national sample. This study also included measures of additional constructs to evaluate their associations with Presence. The methods and results of each of the three studies are presented next.

Study 1: Exploratory Study with College Students

Method

Participants

Six hundred thirty-nine college students 18–65 years old ($M = 19.79$, $SD = 2.99$) participated in this study from May through September of 2022. Fifty-eight participants were omitted due to failing at least two or more (of four) attention checks, not completing the full survey, being suspected duplicate responses, or reporting an age below 18 even though the consent explicitly stated that one needed to be at least 18 years old to participate. The remaining 599 participant responses were used in the subsequent analyses. 71.95% of participants identified as female, 22.54% identified as male, 4.51% identified as non-binary, and 2.00% selected ‘prefer not to respond’ or ‘other’. A range of racial and ethnic identities were represented in this sample: 37.90% Asian, 33.39% White, 14.52% multiple races, 6.34% Hispanic or Latino/a/x, 2.17% Black or African American, 0.33% Native American, American Indian, or Alaskan Native, 0.17% Native Hawaiian or Pacific Islander, and 4.34% selected ‘prefer not to say’ or ‘other’.

Procedure

All participants were affiliated with the University of Washington. Some participants ($N = 95$) were recruited from Introduction to Psychology courses and their participation counted toward extra credit. The remaining participants ($N = 504$) were either current undergraduate

students, new students who were about to start their first-year of college, or recent college graduates who participated within three months of graduating. Students were recruited via email invitations, course announcements, tabling, or through viewing advertisements in school newspapers, newsletters, posters, and flyers. They were informed that they could enter a raffle for a chance to win one of 48 \$5 ice cream gift cards, three \$20 Amazon gift cards, or a \$100 Amazon gift card for completing this one-time online survey.

After providing their informed consent, participants read the following prompt:

Think back to an experience you've had, fairly recently, that resonates with any or all of the statements in the bulleted list below. Your experience may have been brief or may have lasted a longer period of time. During your experience, your body may or may not have been active.

- You felt receptive and alive to the here-and-now.
- You weren't thinking about the past or worrying about the future.
- Your mind felt peaceful even while highly aware of what was going on.
- You experienced a sense of freedom.
- A part of your mind was aware of you in the experience, and not judging any of it.
- You felt a connection to – or even part of – a larger existence.

Participants were told that the rest of the survey would be asking questions about the experience they chose. To continue, participants had to select the response, "Yes, I have an experience in mind."

On the next page, participants viewed the prompt again and were instructed to answer several qualitative questions on what led up to their experience, what occurred during their

experience, and how they felt during their experience. They also indicated how long their experience lasted and how recently it occurred.

Participants were then asked to “please indicate the extent to which each statement below describes your experience” on a 7-point rating scale with the following points: *not at all*, *very slightly*, *a little*, *moderately*, *quite a bit*, *very much*, and *completely*. The 35 Presence items were randomly displayed on six different pages, and this order was randomized across participants. Additionally, an attention check item was included among the Presence items asking participants to select a certain response option.

Then, participants answered brief questions on whether they understood the prompt and whether they were able to keep their experience in mind while responding to the survey questions. The Qualtrics survey then re-displayed their written descriptions of their experience, and they were told to keep their experience in mind when completing the next set of state measures (detailed under State Measures). All participants completed measures of mindfulness, flow, and ego-dissolution. Participants who were receiving psychology course credit ($N = 95$) also completed four additional measures: Nondual Awareness Assessment – State scale, Brief State Rumination Inventory, Self-Reflection and Insight Scale, and The Big-Five Personality Inventory. Following completion of the state measures, participants were informed that they would be asked a series of questions on how they generally feel and were then presented with the Self-Reflection and Insight Scale as well as the Big Five Inventory. Lastly, all participants answered demographic questions. Introductory psychology students received course credit and other students had the option to enter the raffle.

State Measures

Mindfulness. Participants responded to the 13-item Toronto Mindfulness Scale (TMS; Lau et al., 2006) on a scale from *Not at all* (1) to *Very much* (5), such that higher responses indicated a stronger experience of mindfulness. Examples of items include, “I was curious to see what my mind was up to from moment to moment” (Curiosity factor) and “I experienced myself as separate from my changing thoughts and feelings” (Decentering factor). For the full scale, see [Appendix D](#). Additionally, an attention check item was included among the mindfulness items asking participants to select a certain response option.

Flow. Participants responded to the 32-item Flow State Scale (FSS; Jackson & Marsh, 1996) on a 5-point Likert Scale from *Strongly disagree* (1) to *Strongly agree* (5) to indicate the extent they experienced each item, such that higher responses indicate a greater degree of flow. This scale included nine factors: Challenge-Skill Balance (e.g. “My abilities matched the high challenge of the situation.”), Action-Awareness Merging (e.g. “Things just seemed to be happening automatically.”), Clear Goals (e.g. “I had a strong sense of what I wanted to do.”), Unambiguous Feedback (e.g. “It was really clear to me that I was doing well.”), Concentration on Task at Hand (e.g. “I had total concentration.”), Paradox of Control (e.g. “I felt in total control of what I was doing.”), Loss of Self-Consciousness (e.g. “I was not concerned with how I was presenting myself.”), Transformation of Time (e.g. “The way time passed seemed to be different from normal.”), and Autotelic Experience (e.g. “The experience left me feeling great.”). For the full scale, see [Appendix E](#). Additionally, an attention check item was included among the flow items asking participants to select a certain response option.

Ego-Dissolution. Participants rated the extent they experienced ego-dissolution using the 8-item Ego-Dissolution Inventory (EDI; Nour et al., 2016). Participants responded to each item

on a 0 to 100 visual analog scale, with only the endpoints were labeled with “*No, not more than usually*” (0) and “*Yes, I experienced this completely/entirely*” (100). Items included “I experienced a dissolution of my “self” or ego.” and “All notion of self and identity dissolved away.” For the full scale, see [Appendix F](#).

Nondual Awareness. Participants receiving psychology course credit (n = 95) completed the Nondual Awareness Dimensional Assessment - State scale (NADA-S; Hanley et al., 2018), which contained the following three items: “I experienced all things seeming to unify into a single whole”; “I felt surrounded and filled with a blissful warmth or energy”; and “I experienced all sense of self and identity dissolve away.” Participants indicated how well these statements described what they experienced on a 10-point scale in which only item anchors *Not at all* (1) and *Very much* (10) were labeled. For the full scale, see [Appendix G](#).

Rumination. Participants responded to the 8-item Brief State Rumination Inventory (BSRI; Marchetti et al., 2018) on a *Completely disagree* (0) to *Completely agree* (100) visual analogue scale. Marchetti et al. originally validated the scale with the phrase “Right now” at the start of each item; however, in the current study it was critical to uncover how much participants were ruminating at the time of their experience, not at the current moment of completing the survey. Thus, the phrase “Right now” was eliminated from all items and items were changed to past tense. For example, the original item “Right now, it is hard for me to shut off negative thoughts about myself” was revised to “It was hard for me to shut off negative thoughts about myself.” Other studies have also adapted the BSRI, such as omitting the phrase “Right now” and changing the tense of the items (Muir et al., 2023). For the full scale, see [Appendix H](#).

Trait Measures

Self-Reflection and Insight. Participants rated their degree of self-reflection and insight using the Self-Reflection and Insight Scale (SRIS; Grant et al., 2002). This 2-factor scale contains 12 items measuring self-reflection (e.g., “I frequently take time to reflect on my thoughts”) and 8 items measuring insight (e.g., “I usually know why I feel the way I do”), with over half of the insight items requiring reverse-scoring (e.g., “I’m often confused about the way that I really feel about things”). Participants rated all items on a 6-point rating scale from *Strongly disagree* (1) to *Strongly agree* (6). For the full scale, see [Appendix I](#).

Personality. Participants responded to the 44-item Big Five Inventory (BFI; John et al., 1991, 2008) using a five-point agreement scale ranging from *Strongly disagree* to *Strongly agree*. This instrument contains five factors: Agreeableness (e.g., “Is helpful and not selfish with others”), Conscientiousness (e.g., “Makes plans and sticks to them”), Extraversion (e.g., “Talks a lot”), Neuroticism (e.g., “Gets nervous easily”), and Openness to Experience (e.g., “Is curious about a lot of different things”). Many items (e.g., “Prefers work that is routine”) were reverse scored. For the full scale, see [Appendix J](#).

Results

Part 1: Exploratory Factor Analyses

The 35 potential Presence items were analyzed in R using version 4.2.1 using the *psych* and *lavaan* packages (R Core Team, 2019; Rosseel, 2012; Revelle, 2023). Correlations across the items were also assessed and shown in Tables 11-13.

Table 11

Means, Standard Deviations, and Correlations of the Stillness of Mind Items in Study 1: College EFA Sample

Item	Item ID	M	SD	1.	2.	3.	4.	5.
1. My mind felt like a calm, clear lake	ST 1	5.00	1.69	1	--			
2. If you let a bucket of sandy water sit, the water becomes clear as the sand settles. It felt like my mind experienced something like that	ST 2	4.36	1.78	.48	1	--		
3. There were moments when my mind felt still	ST 3	4.78	1.72	.51	.45	1	--	
4. My mind was free from inner dialogue	ST 4	4.62	1.79	.38	.25	.33	1	--
5. My mind felt settled	ST 5	5.34	1.49	.57	.40	.52	.34	1

Note. $N = 599$. M and SD are used to represent mean and standard deviation, respectively. All inter-item correlations were significant, below $p = .05$.

Table 12

Means, Standard Deviations, and Correlations of the Present Moment Awareness and Openness to What Is Items in Study 1: College EFA Sample

Item	Item ID	M	SD	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. I sensed at the time that I was fully alive in that moment	PMA1	5.75	1.36	1	--								
2. Even as I was immersed in the experience, there was a part of me that was aware of it	PMA2	5.32	1.40	.31	1	--							
3. I was immersed in the experienced without getting lost in it	PMA3	5.32	1.42	.24	.32	1	--						
4. It was like I was aware of everything, moment by moment	PMA4	5.03	1.59	.42	.27	.27	1	--					
5. I was conscious of myself experiencing the moment	PMA5	5.54	1.42	.37	.49	.29	.33	1	--				
6. I welcomed what was happening to me for what it was	OP1	5.93	1.16	.38	.27	.26	.26	.27	1	--			
7. My heart was open to the full experience	OP2	5.87	1.27	.55	.34	.35	.42	.37	.52	1	--		
8. I found myself receptive to the experience as it unfolded	OP3	5.60	1.23	.36	.34	.32	.35	.32	.46	.50	1	--	
9. My lack of judgment toward the experience helped me be open to it	OP4	4.79	1.75	.27	.22	.17	.27	.23	.28	.32	.31	1	--

10. I accepted the reality of the experience for what it was OP7 5.77 1.22 .38 .23 .31 .35 .35 .47 .46 .42 .31 1

Note. $N = 599$. M and SD are used to represent mean and standard deviation, respectively. All inter-item correlations were significant, below $p = .05$.

Table 13

Means, Standard Deviations, and Correlations of the Expansion of Consciousness and Merging of Self Items in Study 1: College EFA Sample

Item	Item ID	M	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. I felt a part of myself expanding outward	EXP1	4.27	1.85	1	--										
2. My consciousness extended outward as if toward a horizon	EXP2	3.99	1.85	.67	1	--									
3. My consciousness expanded	EXP3	4.25	1.81	.63	.68	1	--								
4. I felt limitless	EXP4	4.55	1.85	.49	.48	.49	1	--							
5. The core of my being radiated outward	EXP5	4.09	1.91	.62	.63	.58	.50	1	--						
6. A part of me felt boundless	EXP6	4.92	1.67	.48	.45	.44	.64	.46	1	--					
7. I felt a deep sense of oneness	MER1	4.67	1.76	.46	.55	.50	.39	.45	.44	1	--				
8. I became a part of something greater than myself	MER2	4.18	1.94	.55	.57	.56	.45	.52	.48	.43	1	--			
9. My sense of self faded as I became part of something greater	MER3	3.67	1.93	.51	.55	.48	.40	.48	.40	.39	.59	1	--		
10. I seemed to merge with something beyond myself	MER4	3.99	1.99	.61	.63	.61	.45	.58	.46	.46	.69	.61	1	--	
11. I felt my self merging with everything, as though I were a wave that merged back into the ocean	MER5	4.05	1.94	.58	.62	.58	.42	.51	.42	.47	.54	.51	.62	1	--
12. I felt a part of it all	MER6	5.31	1.55	.42	.39	.36	.42	.43	.37	.37	.44	.33	.39	.39	1

Note. $N = 599$. M and SD are used to represent mean and standard deviation, respectively. All inter-item correlations were significant, below $p = .05$.

Before conducting factor analyses on all the items together, we assessed the dimensionality of the items that were hypothesized to be in each lower-order factor. It was hypothesized that each of these tests would indicate one factor lay beneath each of the five groups. For each of these single-factor item sets, we conducted parallel analysis dimensionality tests using Pearson correlations and examined the sum of eigenvalues greater than one. Then, we conducted an exploratory factor analysis using Minres (minimum residuals). When dimensionality tests suggested a multidimensional factor solution, we used oblique rotation for EFAs.

For the five hypothesized Stillness of Mind items, parallel analysis and sum of eigenvalues greater than one both indicated a one-factor solution. A one-factor model was fitted to the Stillness of Mind items and explained 43.8% of the variance.

When exploring the dimensionality of the hypothesized Present Moment Awareness items, we also included items that we suspected would measure Present Moment Immersion as well items conceptually in between Present Moment Immersion and Present Moment Awareness (hereafter, Present Moment-Related). As described earlier, we sought to examine whether these items would also differentiate empirically. If so, then our intention was to keep only the Present Moment Awareness items.

Parallel analysis and sum of eigenvalues greater than one on the 11 Present Moment Awareness, Present Moment Immersion, and Present Moment-Related items suggested a two-factor solution. The two-factor EFA indicated that all five of the Present Moment Awareness items loaded on a single factor. The other factor was composed of most of the other items, and two items cross loaded onto both factors. The conceptual proposition that Present Moment Awareness is different from being immersed in the present moment was supported by empirical

evidence, thus providing motivation to keep only the five Present Moment Awareness items. A one-factor model fitted to the five Present Moment Awareness items explained 33.6% of the variance.

For the seven hypothesized Openness to What Is items, results from both parallel analysis and sum of eigenvalues greater than one indicated a two-factor solution. Upon examining the factor loadings from a two-factor EFA, OP1–OP4 and OP7 were loading onto one factor, whereas OP5 and OP6 were separating out into their own factor. Upon examining correlations of all 35 potential Presence Scale items, OP5 and OP6 had stronger correlations with the items in the Expansion of Consciousness and Merging of Consciousness factors than with the other items within the Openness to What Is factor. Thus, there was clear evidence to omit OP5 and OP6. Parallel analysis and sum of eigenvalues greater than one suggested that a one-factor solution should be retained for the five remaining Openness to What Is items. A one-factor model that was fitted to the five Openness to What Is items explained 42.8% of the variance.

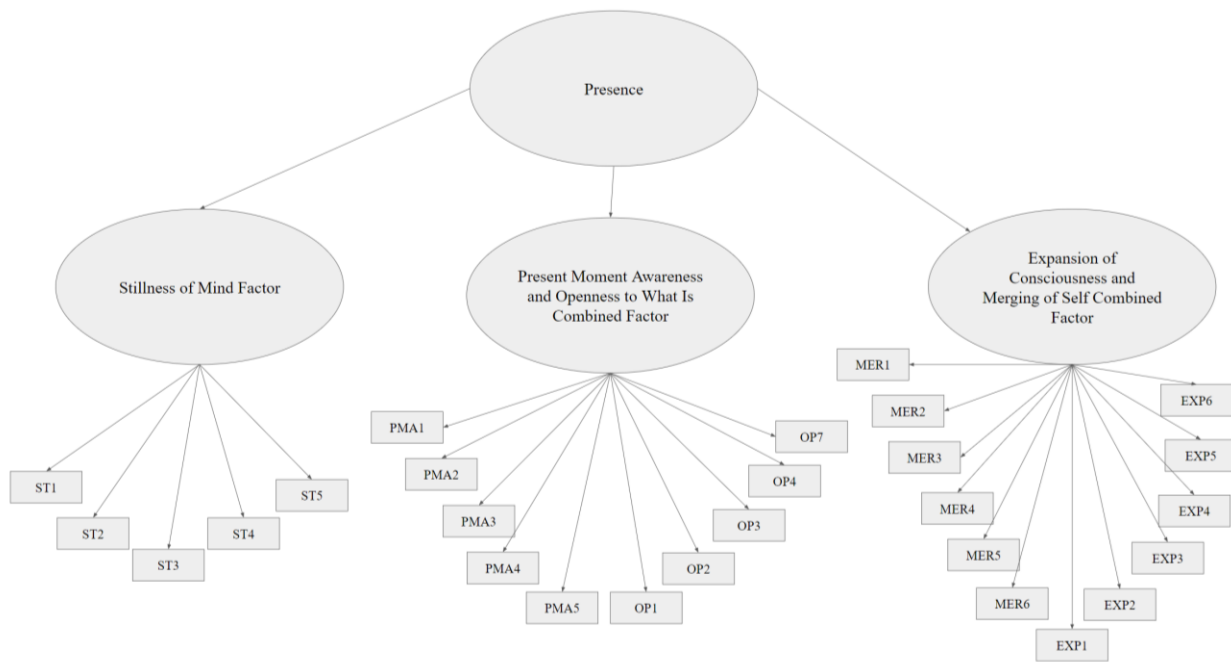
Dimensionality tests on the Expansion of Consciousness items and Merging of Self items separately each indicated one-factor solution. However, upon examining the moderately high correlations between Expansion of Consciousness items and Merging of Self items, it was worth investigating the dimensionality of all of these items together. Parallel analysis and sum of eigenvalues greater than one both indicated a one-factor solution for these 12 items. A one-factor model fitted to the 12 Expansion of Consciousness items and Merging of Self items explained 50.8% of the variance.

At this stage, the full model of Presence could be tested. Exploratory factor analyses using the Schmid-Leiman rotation (Schmid & Leiman, 1957) were conducted on most of the items, excluding items OP5 and OP6. Of the potential Present Moment contenders, only the five

Present Moment Awareness items were included as immersion had separated out from awareness empirically. Among these 27 items, a hierarchical three-factor model appeared to be most promising, as conceptually shown in Figure 7.

Figure 7

Hierarchical Three-Factor Model of Presence with 27 Potential Presence Items



54% of the variance in the items could be attributed to the hierarchical factor, or Presence. The items exhibited strong reliability: Cronbach’s $\alpha = 0.93$; Ω total = 0.94. See Table 14 for loading results from this exploratory factor analysis.

Other models were also explored using exploratory factor analysis, and this hierarchical three-factor solution had the cleanest results.

Table 14

Item Loading Results for Study 1: College EFA Sample

Item	Factor loading			g*
	1	2	3	
Factor with 5 ST items				0.59
(ST1) My mind felt like a calm, clear lake	0.06	-0.01	0.76	
(ST2) If you let a bucket of sandy water sit, the water becomes clear as the sand settles. It felt like my mind experienced something like that	0.29	0.03	0.45	
(ST3) There were moments when my mind felt still	0.12	-0.05	0.66	
(ST4) My mind was free from inner dialogue	0.11	0.02	0.40	
(ST5) My mind felt settled	-0.12	0.21	0.69	
Factor with 10 PMA & OP items				0.71
(PMA1) I sensed at the time that I was fully alive in that moment	0.14	0.55	0.05	
(PMA2) Even as I was immersed in the experience, there was a part of me that was aware of it	0.00	0.53	-0.05	
(PMA3) I was immersed in the experienced without getting lost in it	-0.09	0.47	0.11	
(PMA4) It was like I was aware of everything, moment by moment	0.20	0.37	0.15	
(PMA5) I was conscious of myself experiencing the moment	0.03	0.54	-0.03	
(OP1) I welcomed what was happening to me for what it was	-0.08	0.64	0.04	
(OP2) My heart was open to the full experience	0.02	0.75	0.00	
(OP3) I found myself receptive to the experience as it unfolded	0.00	0.62	0.09	
(OP4) My lack of judgment toward the experience helped me be open to it	0.13	0.30	0.13	
(OP7) I accepted the reality of the experience for what it was	-0.02	0.60	0.08	
Factor with 12 EXP & MER items				0.73
(EXP1) I felt a part of myself expanding outward	0.79	0.01	-0.01	
(EXP2) My consciousness extended outward as if toward a horizon	0.82	-0.05	0.07	
(EXP3) My consciousness expanded	0.77	-0.06	0.09	
(EXP4) I felt limitless	0.49	0.24	0.02	
(EXP5) The core of my being radiated outward	0.66	0.12	0.02	
(EXP6) A part of me felt boundless	0.44	0.24	0.09	
(MER1) I felt a deep sense of oneness	0.44	0.13	0.22	
(MER2) I became a part of something greater than myself	0.75	0.14	-0.17	

(MER3) My sense of self faded as I became part of something greater	0.70	-0.07	0.06
(MER4) I seemed to merge with something beyond myself	0.82	0.03	-0.07
(MER5) I felt my self merging with everything, as though I were a wave that merged back into the ocean	0.69	-0.03	0.13
(MER6) I felt a part of it all	0.27	0.53	-0.07

Note. * these *g* loadings pertain to the higher loading for the Presence high-order factor. Factor loadings above 0.3 are in bold.

Part 2: Exploratory Validity Findings

As a preliminary step to assess the associations between Presence and constructs hypothesized to be relevant as shown in Table 10, correlations between the Presence items and items in existing scales were assessed. As previously described, in this sample, 35 Presence items were administered, but over half of these would be cut for the final Presence Scale. Thus, at this stage in the Presence Scale development process, examining inter-item correlations was a viable approach to initially empirically assessing validity since Presence scores could not yet be calculated. Given the large number of items, figures visualizing the correlation matrices between items were examined.

Each figure includes items from two scales: the potential Presence items as well as items from an existing scale we administered. The upper left-hand segment of all these visualizations illustrates the potential Presence items’ correlations with each other. The upper right-hand and the lower left-hand sections illustrate the correlations between the potential Presence items and items from the other construct assessed. The lower right-hand segment depicts inter-item correlations among items within the other construct. Inter-item correlations are visualized with dots that range from blue (positive) to red (negative), with white indicating no correlation. The darker the shade of blue or red and the larger the circle, the greater the magnitude of the correlation.

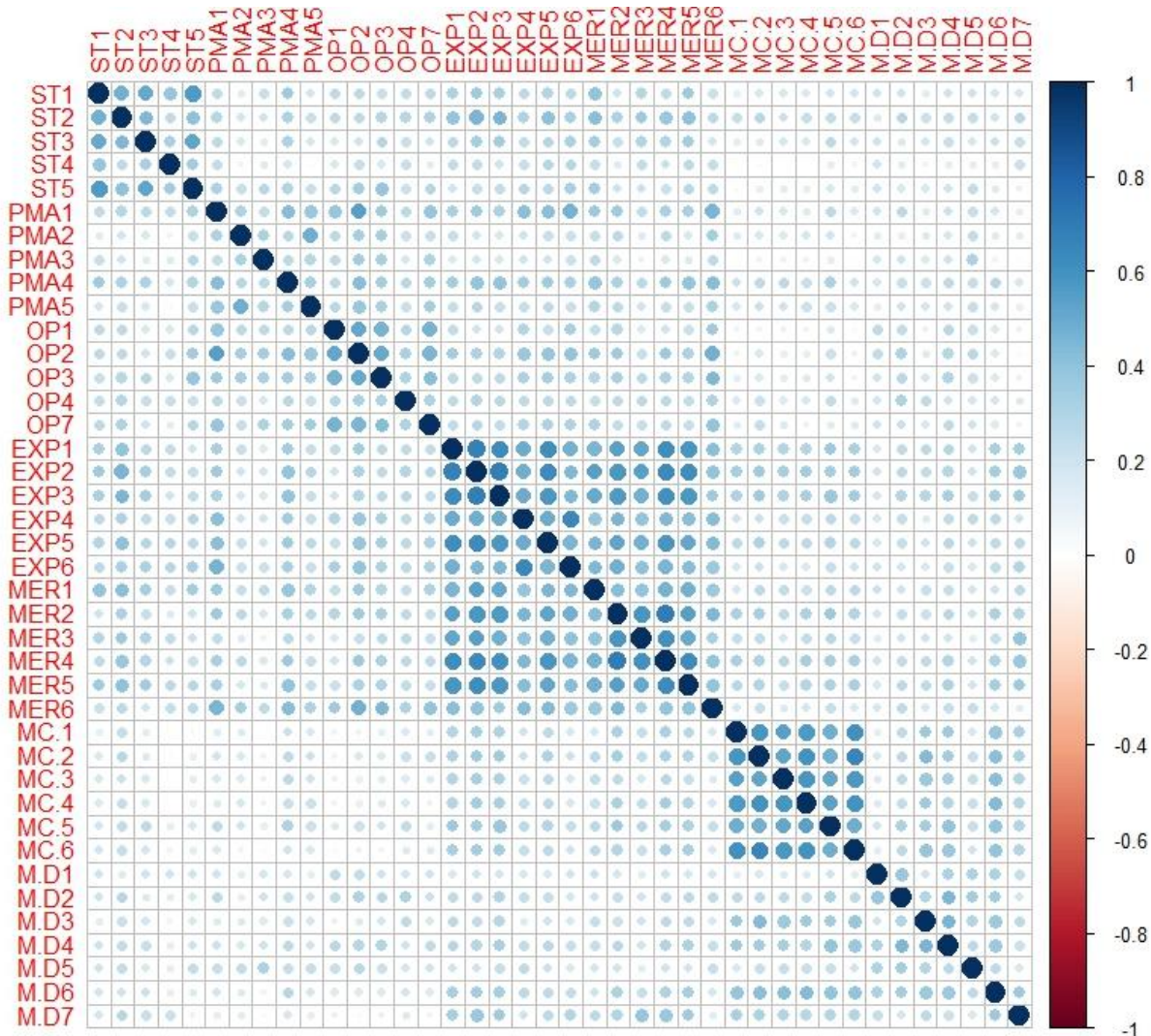
Although all 599 participants completed the potential Presence Scale items, not all participants answered all of the items from the other scales. Upon examining all the items administered from other scales: 9.5% ($n = 57$) skipped one or more items; 6.5% ($n = 39$) skipped 2 or more items; and 0.5% ($n = 3$) skipped 10 or more items. If participants did skip items, they were most likely in the Ego-Dissolution Inventory. For the following correlation calculations and visualizations, missing data is accounted for by pairwise deletion.

The visualizations are shown in Figures 8–18. These visualizations were created in R version 4.2.1 1 using the *corrplot* package (Wei & Simko, 2021). Note that Figures 11-18 were created with a subset of 95 participants who completed these measures; thus, readers should interpret these results with caution given the smaller sample size.

Figure 8

Correlation Plot of Potential Presence Items and Mindfulness Items in Study 1: College EFA

Sample



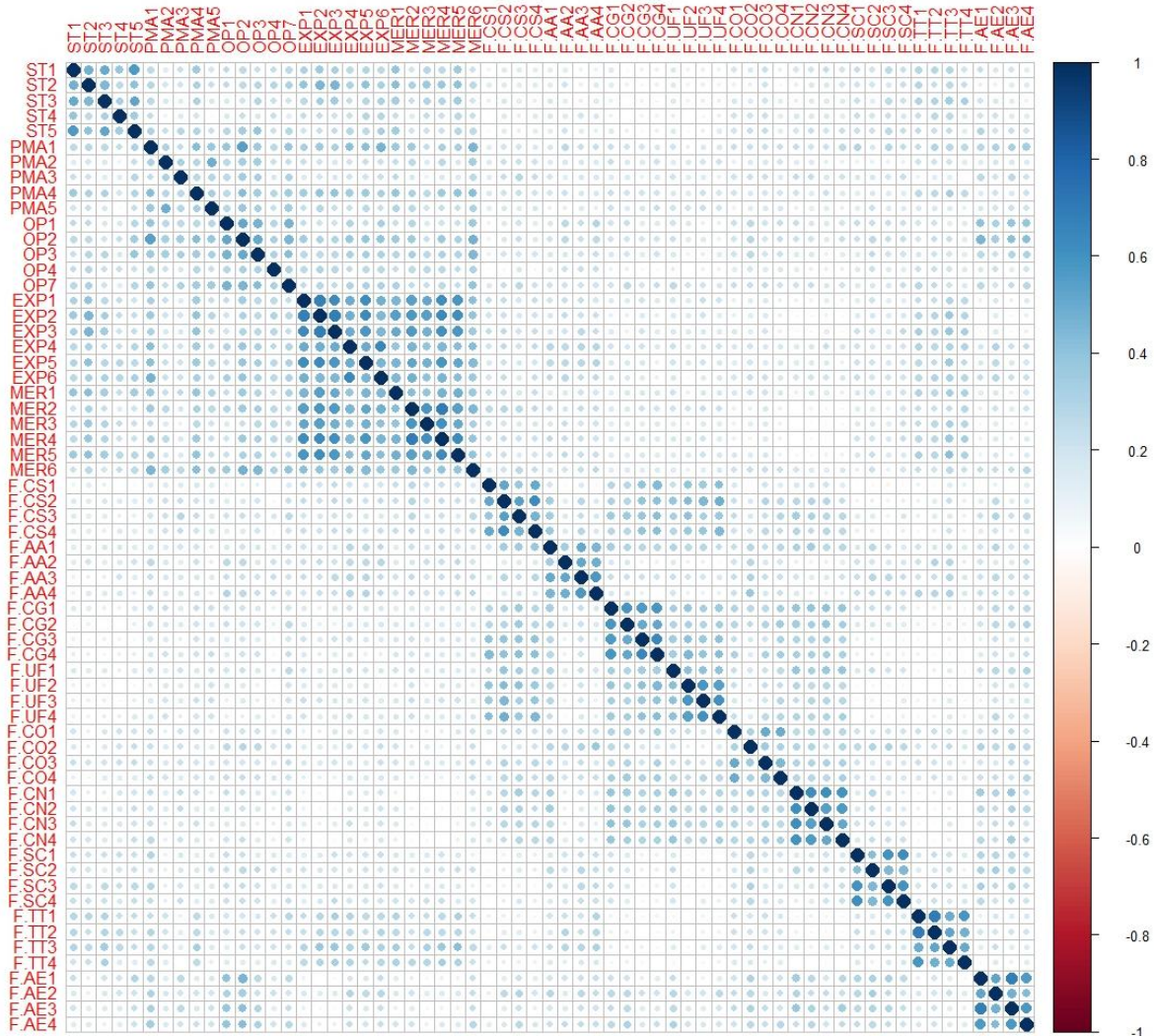
Note. $N = 599$. The potential Presence items span from ST to MER. ST = Stillness of Mind, PMA = Present Moment Awareness, OP = Openness to What Is, EXP = Expansion of Consciousness, and MER = Merging of Self. The mindfulness items include MC. = Curiosity and M.D = Decentering.

Figure 8 illustrates that the potential Presence items were more strongly correlated with one another than they are with the mindfulness items. Additionally, the Decentering mindfulness items were not as strongly correlated with one another as the Curiosity mindfulness items are

with one another. Overall, the potential Presence items' correlations with the mindfulness items ranged from no correlation to moderate positive correlations. On average, the potential Presence items exhibited modest positive correlations with the mindfulness items.

Figure 9

Correlation Plot of Potential Presence Items and Flow Items in Study 1: College EFA Sample



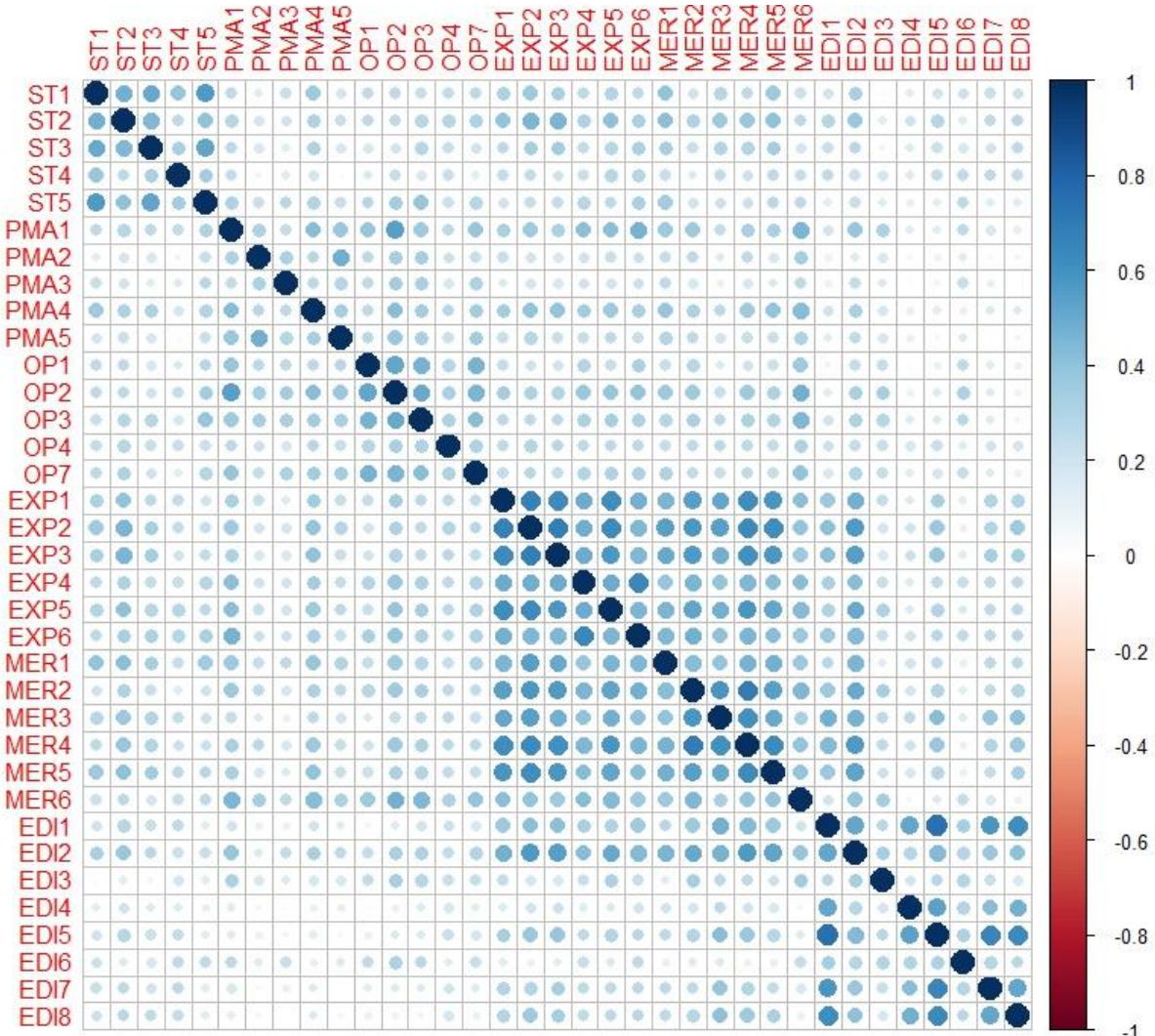
Note. $N = 599$. The potential Presence items span from ST to MER. ST = Stillness of Mind, PMA = Present Moment Awareness, OP = Openness to What Is, EXP = Expansion of Consciousness, and MER = Merging of Self. The flow factor labels are as follows: F.CS = Challenge-Skill Balance, F.AA = Action-Awareness Merging, F.CG = Clear Goals, F.UF = Unambiguous Feedback, F.CO = Concentration on Task at Hand, F.CN = Paradox of Control, F.SC = Loss of Self-Consciousness, F.TT = Transformation of Time, F.AE = Autotelic Experience.

Figure 9 illustrates a small positive correlation between the potential Presence and flow items. As expected, Presence items were more correlated with each other than with the flow items. The Transformation of Time flow items appeared to be slightly more correlated with the Expansion of Consciousness and Merging of Self potential items. Additionally, the Autotelic Experience items appeared to more correlated with OP1 “I welcomed what was happening to me for what it was” and OP2 “My heart was open to the full experience.”

Figure 10

Correlation Plot of Potential Presence Items and Ego-Dissolution Items in Study 1: College EFA

Sample



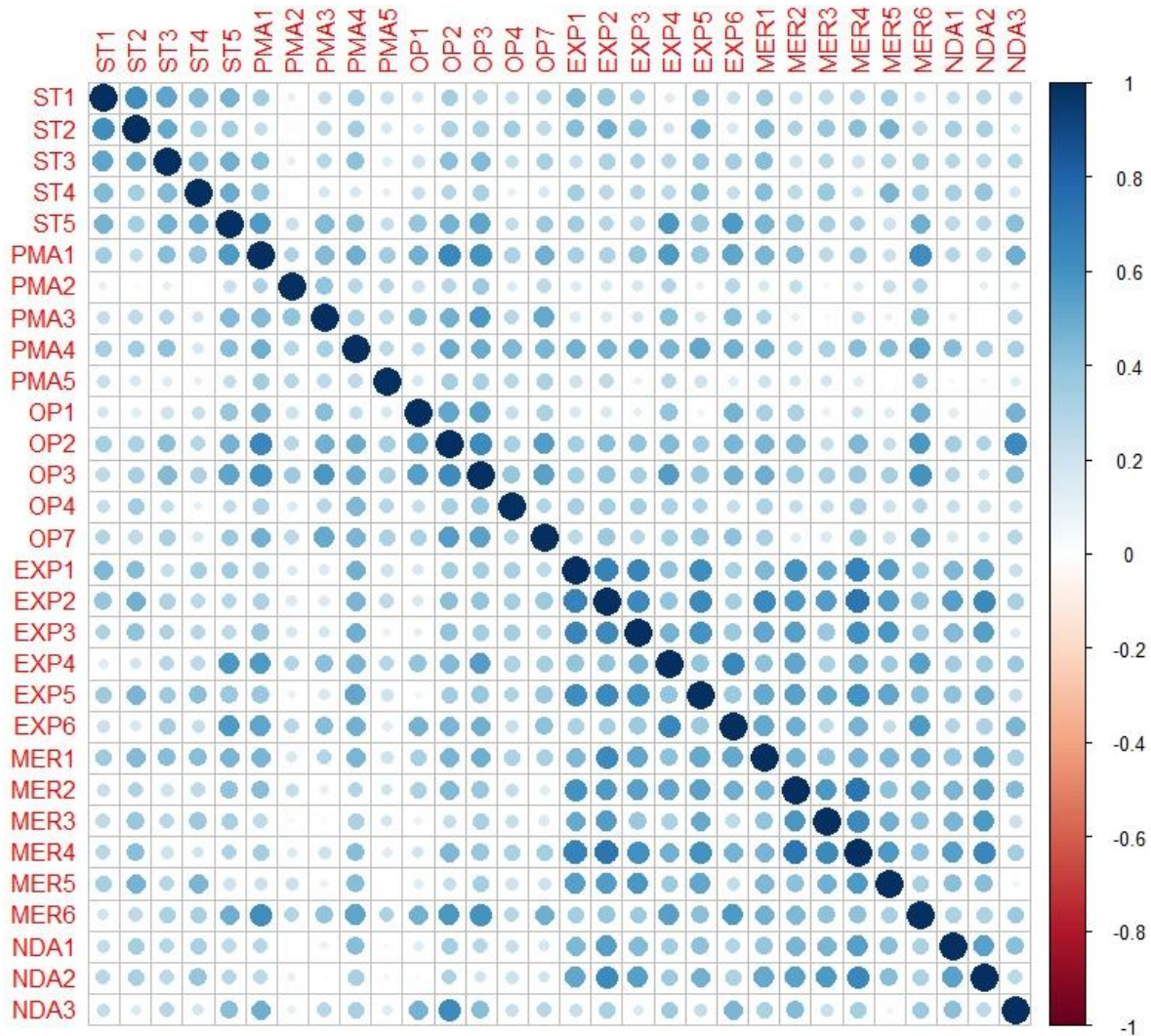
Note. $N = 599$. The potential Presence items span from ST to MER. ST = Stillness of Mind, PMA = Present Moment Awareness, OP = Openness to What Is, EXP = Expansion of Consciousness, and MER = Merging of Self. EDI = Ego-dissolution.

Figure 10 illustrates that the potential Expansion of Consciousness and Merging of Self items were more strongly correlated with one another as a group than the ego-dissolution items were correlated as a group with one another. A few of the ego-dissolution items were strongly correlated with the potential Expansion of Consciousness and Merging of Self items; however, other items exhibited weak positive or near-zero correlation with the potential Presence items. Overall, the potential Presence items, in particular the Expansion of Consciousness and Merging of Self items, were moderately positively correlated with the ego-dissolution items.

Figure 11

Correlation Plot of Potential Presence Items and Nondual Awareness Items in Study 1: College

EFA Sample



Note. $n = 95$. The potential Presence items span from ST to MER. ST = Stillness of Mind, PMA = Present Moment Awareness, OP = Openness to What Is, EXP = Expansion of Consciousness, and MER = Merging of Self. NDA = Nondual awareness.

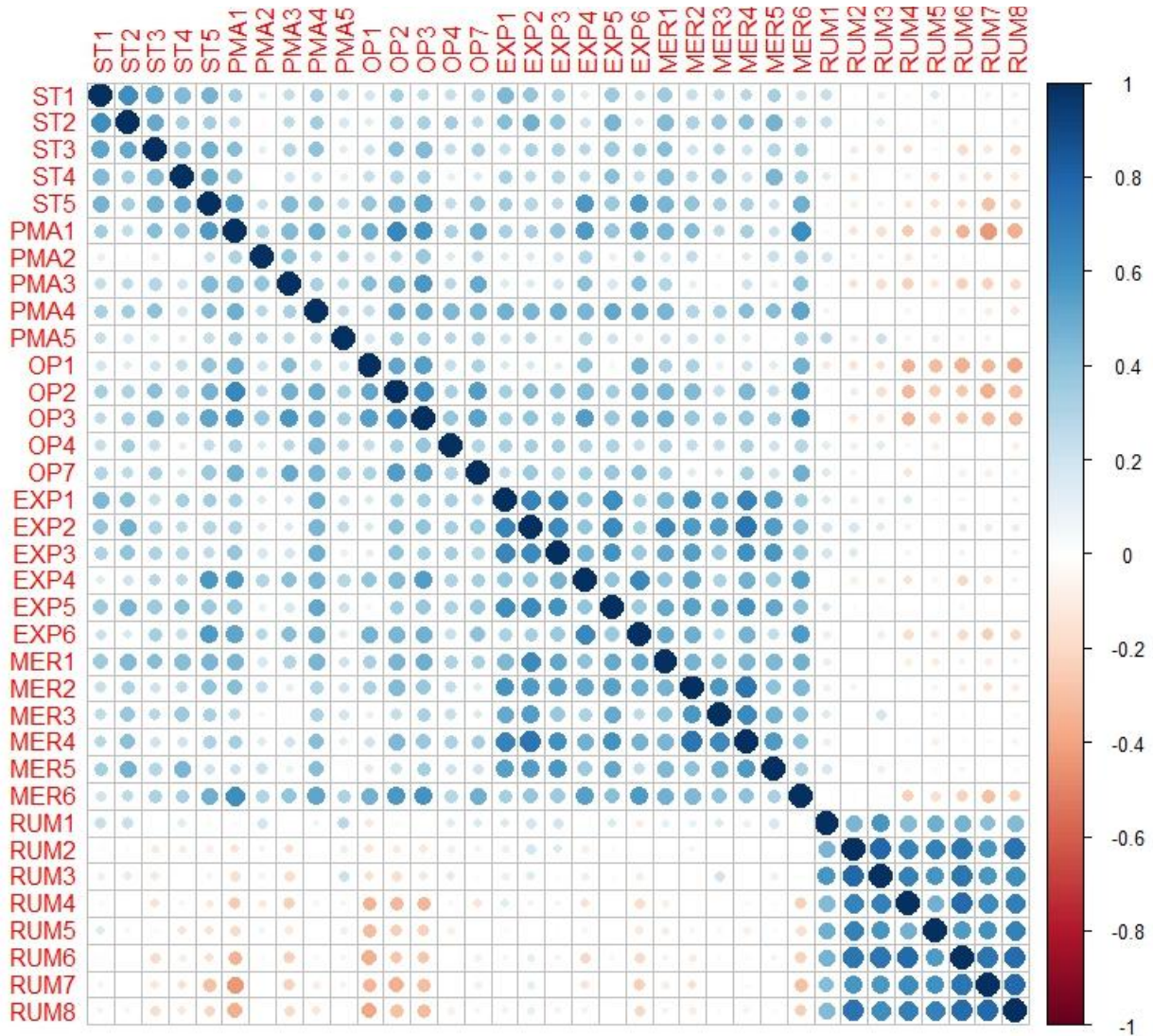
Figure 11 illustrates that the three items composing nondual awareness were not strongly correlated with one another, with inter-item bivariate correlations ranging from .53 to .27. Additionally, nondual awareness’s internal consistency was weak (Cronbach’s $\alpha = .67$). Thus, although the items NDA1 and NDA2 appeared to correlate well with the Expansion of

Consciousness and Merging of Self items, these results need to be interpreted with caution in light of the lower reliability and small sample size.

Figure 12

Correlation Plot of Potential Presence Items and Rumination Items in Study 1: College EFA Sample

Sample



Note. $n = 95$. The potential Presence items span from ST to MER. ST = Stillness of Mind, PMA = Present Moment Awareness, OP = Openness to What Is, EXP = Expansion of Consciousness, and MER = Merging of Self. RUM = Rumination.

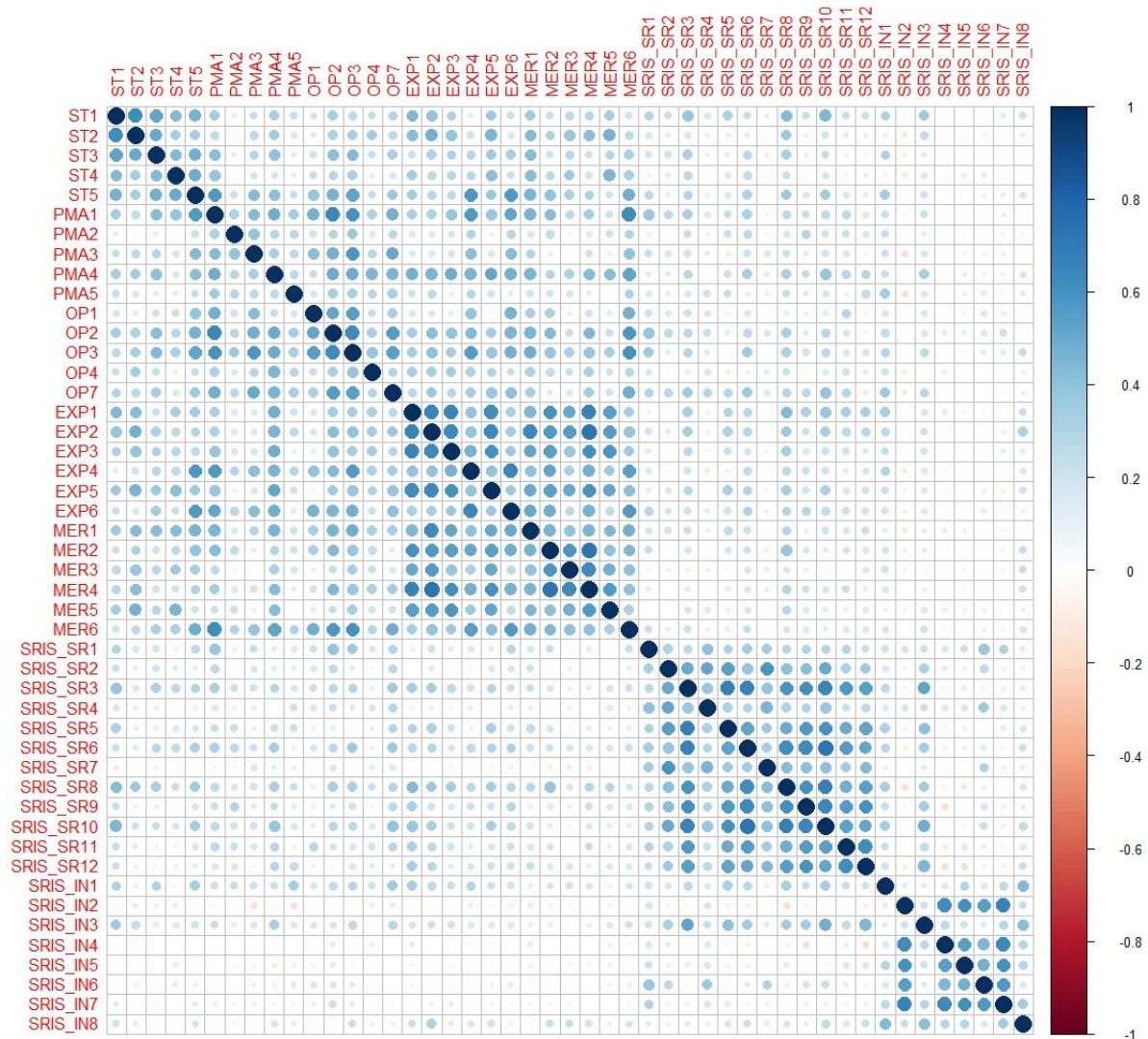
Figure 12 illustrates that the Rumination items correlated well with one another. On average, the Rumination items had a modest negative correlation with the potential Presence

items. The strongest negative correlations exhibited between the Rumination items and the Presence items occurred for items PMA1 and OP1–OP3. These items are, respectively, as follows: “I sensed at the time that I was fully alive in the moment,” “I welcomed what was happening to me for what it was,” “My heart was open to the full experience,” and “I found myself receptive to the experience as it unfolded.”

Figure 13

Correlation Plot of Potential Presence Items and Self-Reflection and Insight Items in Study 1:

College EFA Sample

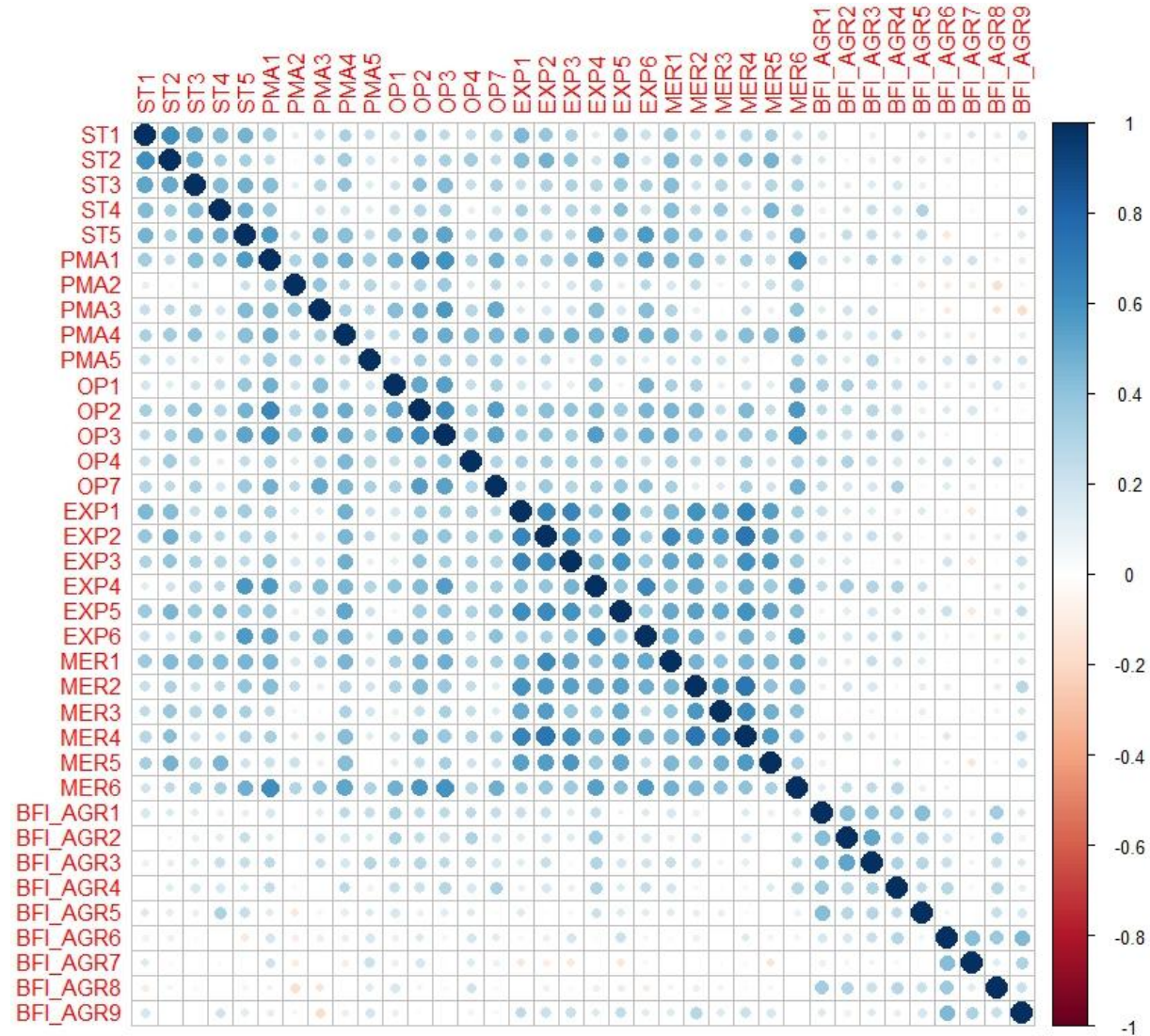


Note. $n = 95$. The potential Presence items span from ST to MER. ST = Stillness of Mind, PMA = Present Moment Awareness, OP = Openness to What Is, EXP = Expansion of Consciousness, and MER = Merging of Self. SRIS_SR = Self-reflection and SRIS_IN = Insight.

Figure 13 illustrates that, on average, the potential Presence items were slightly positively correlated with many of the Self-Reflection items, although some inter-item correlations between potential Presence items and Self-Reflection items appeared to be zero. The Self-Reflection items were positively correlated with one another, and differentiated from nearly all of the Insight items, aside from IN3, “I usually have a very clear idea about why I've behaved in a certain way”. Most of the Insight items were moderately to strongly correlated with one another; however, three of the Insight items were only slightly positively correlated with each other. The Insight items were not correlated with the Presence items, with all of them near zero.

Figure 14

Correlation Plot of Potential Presence Items and Items from the Agreeableness Factor in the Big Five Inventory in Study 1: College EFA Sample

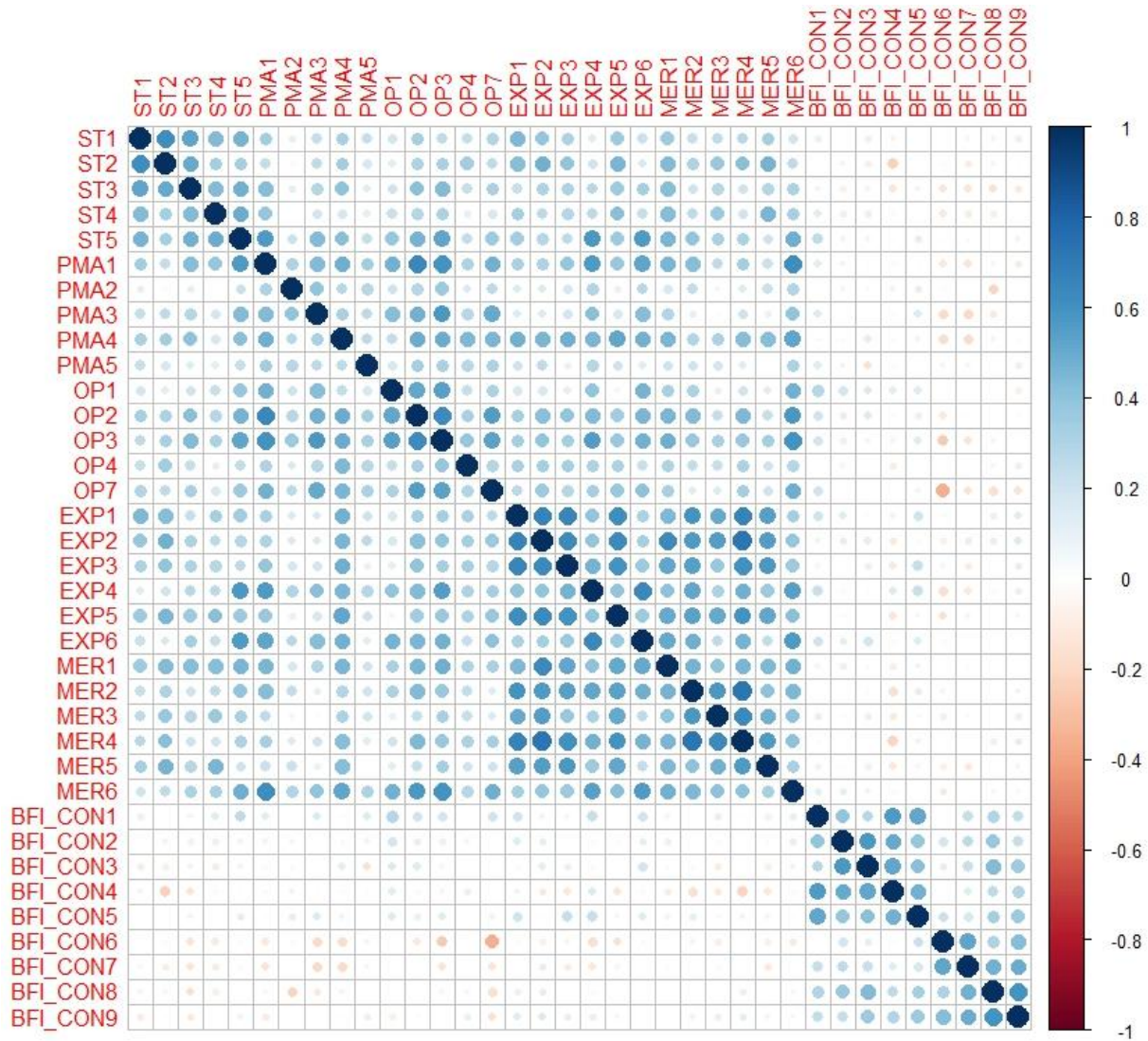


Note. $n = 95$. The potential Presence items span from ST to MER. ST = Stillness of Mind, PMA = Present Moment Awareness, OP = Openness to What Is, EXP = Expansion of Consciousness, and MER = Merging of Self. AGR = Agreeableness.

Figure 14 illustrates that some of the Agreeableness items had a very slight positive correlation with the potential Presence items. However, the Agreeableness items correlated only modestly with one another. Thus, results need to be interpreted with caution due to this low reliability and small sample size.

Figure 15

Correlation Plot of Potential Presence Items and Items from the Conscientiousness Factor in the Big Five Inventory in Study 1: College EFA Sample

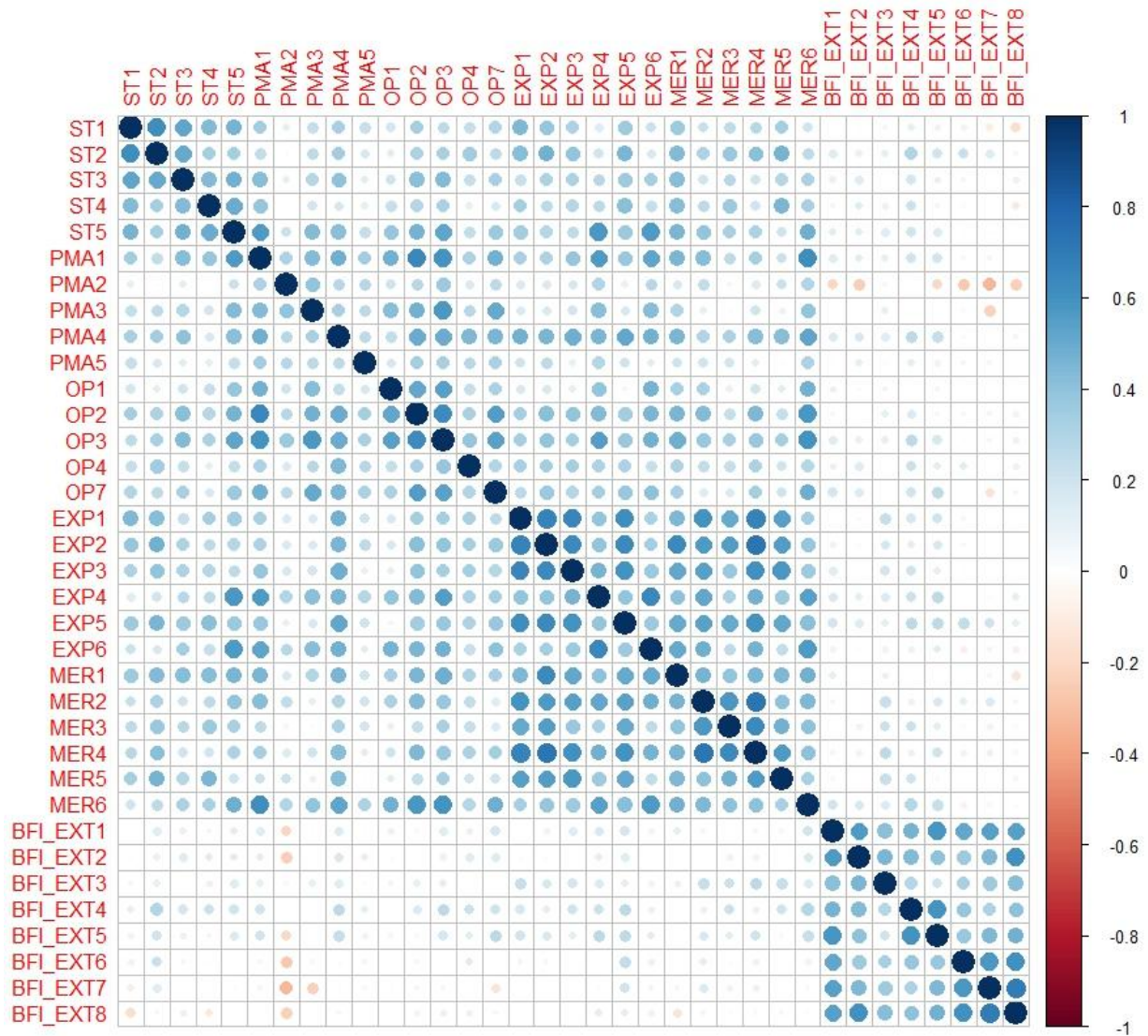


Note. $n = 95$. The potential Presence items span from ST to MER. ST = Stillness of Mind, PMA = Present Moment Awareness, OP = Openness to What Is, EXP = Expansion of Consciousness, and MER = Merging of Self. BFI_CON = Conscientiousness.

Figure 15 illustrates that the vast majority of the Conscientiousness items were not correlated with the potential Presence items. The Conscientiousness items, for the most part, were moderately positively correlated with one another.

Figure 16

Correlation Plot of Potential Presence Items and Items from the Extraversion Factor in the Big Five Inventory in Study 1: College EFA Sample

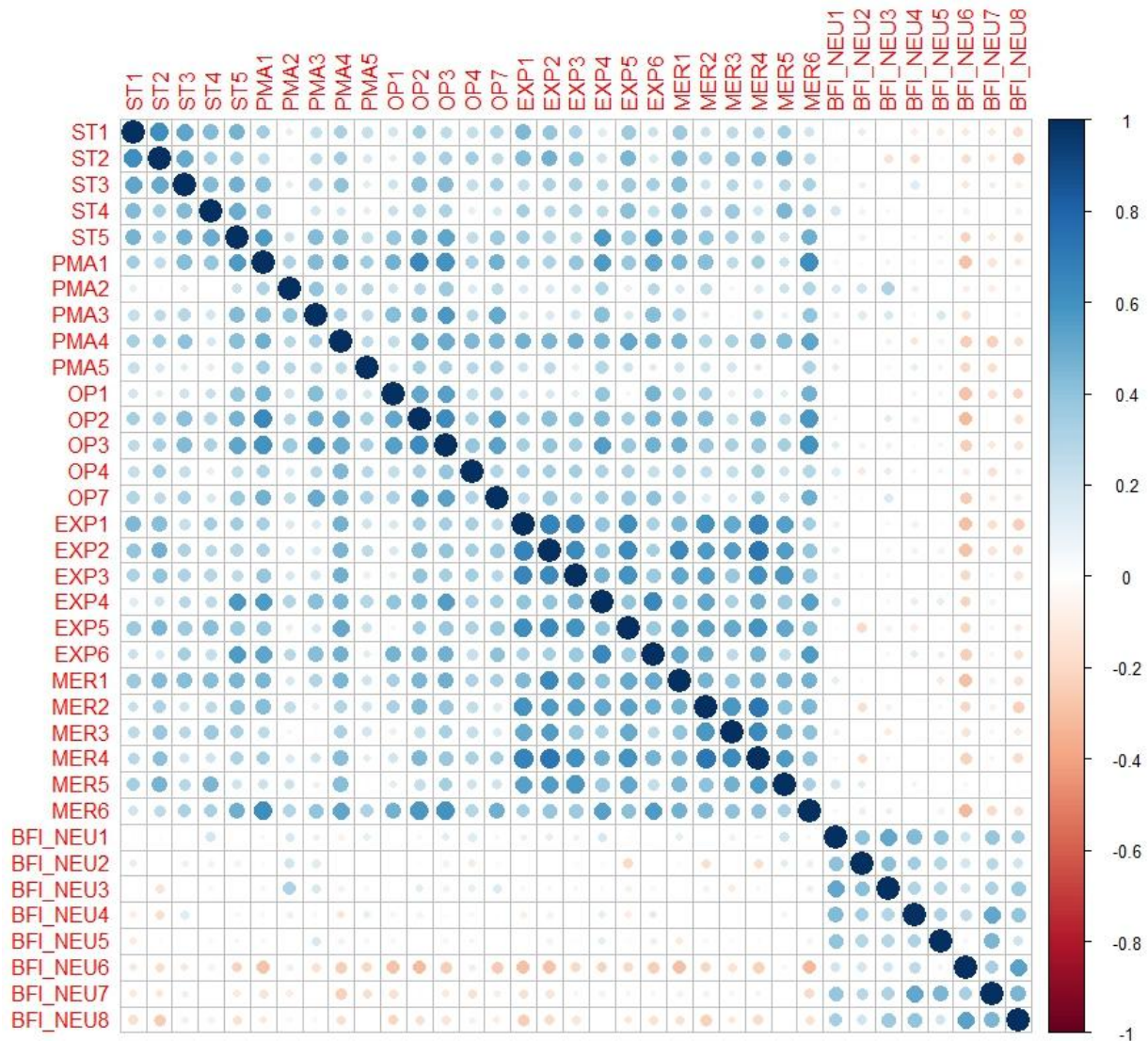


Note. $n = 95$. The potential Presence items span from ST to MER. ST = Stillness of Mind, PMA = Present Moment Awareness, OP = Openness to What Is, EXP = Expansion of Consciousness, and MER = Merging of Self. BFI_EXT = Extraversion.

Figure 16 illustrates that, on average, the Extraversion items appeared to have a near zero correlation with the potential Presence items. The Extraversion items were moderate to strongly positively correlated with one another.

Figure 17

Correlation Plot of Potential Presence Items and Items from the Neuroticism Factor in the Big Five Inventory in Study 1: College EFA Sample

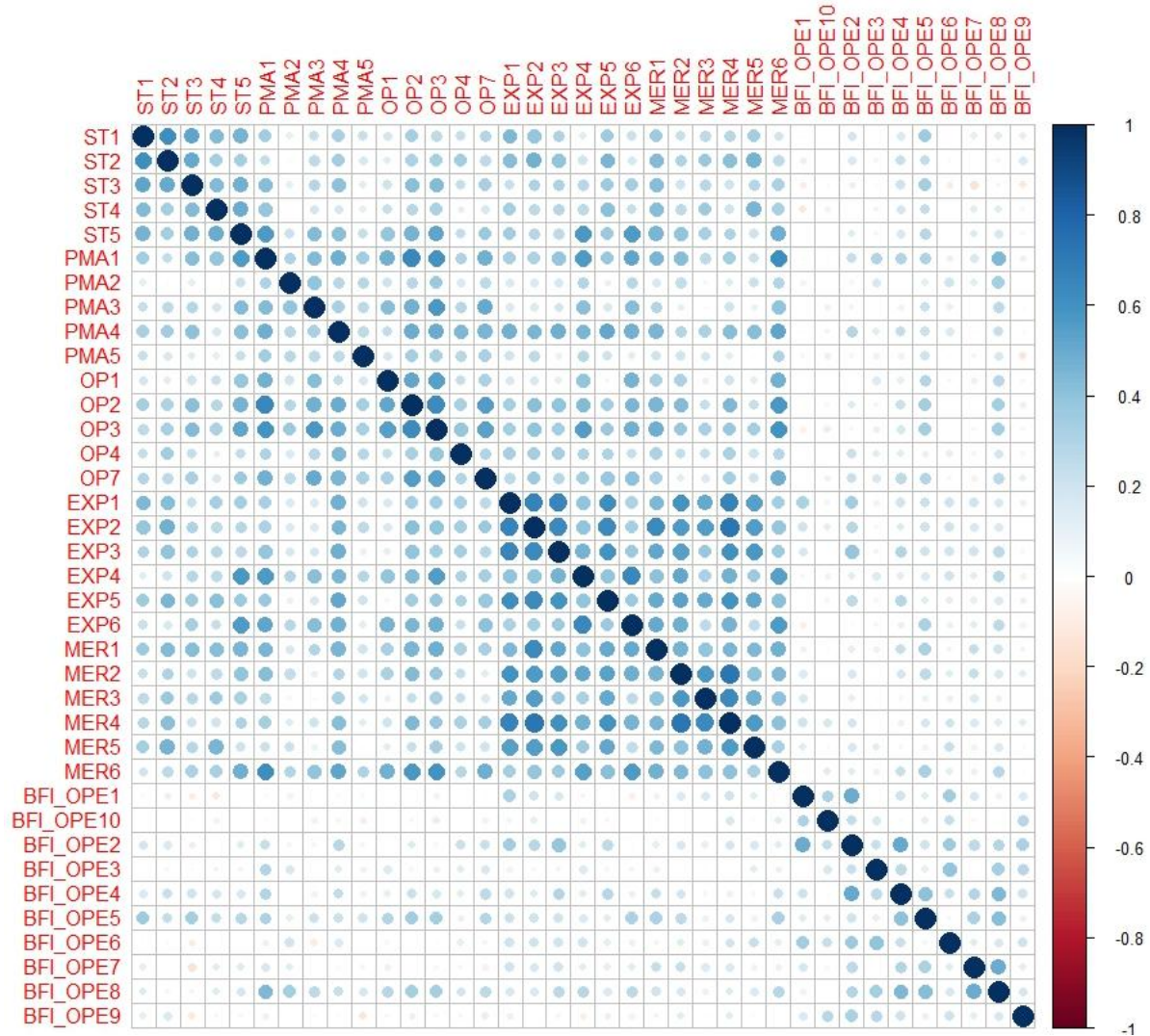


Note. $n = 95$. The potential Presence items span from ST to MER. ST = Stillness of Mind, PMA = Present Moment Awareness, OP = Openness to What Is, EXP = Expansion of Consciousness, and MER = Merging of Self. BFI_NEU = Neuroticism.

Figure 17 illustrates that the Neuroticism items had a near zero correlation with the potential Presence items. Item NEU6, "Remains calm in tense situations," was reversed scored and appeared to exhibit a modest negative association with the potential Presence items. However, that item did not correlate as strongly with the other Neuroticism items. The rest of the Neuroticism items were moderately positively correlated with one another.

Figure 18

Correlation Plot of Potential Presence Items and Items from the Openness to Experience Factor in the Big Five Inventory in Study 1: College EFA Sample



Note. $n = 95$. The potential Presence items span from ST to MER. ST = Stillness of Mind, PMA = Present Moment Awareness, OP = Openness to What Is, EXP = Expansion of Consciousness, and MER = Merging of Self. BFI_OPE = Openness to Experience.

Figure 18 illustrates that the Openness to Experience items were only modestly correlated with one another: many inter-item correlations are near-zero or only slightly positive. Thus, these results need to be interpreted with caution. Some of the Openness to Experience items were slightly positively correlated with the potential Presence items, whereas others had correlations very close to zero. Although conceptually, Openness to What Is is quite different from Openness

to Experience, it is relevant to statistically assess these constructs given that they share the word “Openness.” Within the Presence items, there are no patterns of certain hypothesized factors being more correlated with Openness to Experience than others. This evidence suggests that Openness to What Is measures something distinctly different from Openness to Experience.

Study 2: Replication Study with U.S. National Sample

Before making any revisions to the conceptual model of Presence according to the new hierarchical three-factor solution, a near replication study was conducted with a new national sample from the United States. We did not aim to create a scale that can be used only for college undergraduate students; rather, we intended that the Presence Scale be relevant for a wider population given the methodological and conceptual issues that have arisen from limiting oneself to a single type of population (Hanel & Vione, 2016). Using only convenience sampling during scale development, such as recruiting college students, is one of the most commonly reported limitations in scale development papers since it poses a threat to generalizability (Morgado et al., 2017). Thus, if within the development of the Presence Scale only college undergraduates were sampled, it would be unknown whether the latent model of Presence Scale would replicate when administered with a broader population. Therefore, it is a strength of this work that U.S. national samples were recruited for Studies 2 and 3.

Method

Participants

A U.S. national sample ($N = 384$) was recruited through Prolific in autumn 2022. Prolific is an online platform that pays participants to complete surveys and has been shown to have lower rates of dishonesty, fewer attention check failures, and overall better data quality than other online survey platforms such as MTurk (Eyal et al., 2021). In line with these findings, no

participants failed both of the two attention checks included in this study, so all participants were included in the analyses. We specified to recruit a national sample which ensured that participants would be stratified across gender, age, and major ethnic groups proportional to the U.S. population. For example, using Prolific's national sampling methods, the proportion of 18 to 27-year-old Asian men in the sample will be proportional to this group's prevalence in the U.S. population.

Participants responded from 46 out of the 50 US states, with similar proportions per region to the US census; Northeast (16.67%); Midwest (19.79%); South (41.41%); West (22.14%). Female participants composed 50.3% of the sample ($N = 193$). The racial and ethnicity demographics of the sample were as follows: White (71.35%), Black or African American (12.76%), Asian (5.47%), mixed race (4.69%), Hispanic or Latino/a/x (4.17%), Native American, American Indian, or Alaskan Native (1.04%) and 0.52% selected 'prefer not to say'. Participants ranged from 18 to 84 years old ($M = 45.74$, $SD = 16.02$), with 10.94% ($N = 42$) currently in college. Of the participants that were not in college, participants' level of education was the following: 4-year college degree (39.77%), some college (17.25%), Master's degree (16.08%), a high school degree or GED (9.36%), a 2-year college degree (7.02%), a Professional degree (3.51%), have some graduate education (3.51%), have a Doctoral degree (1.75%), some schooling with no degree (1.17%), and preferred not to say (0.58%). No participant responses were excluded for analyses as none of them failed more than one attention check and all had complete data.

Procedure

Participants were invited to complete the survey titled "A study of memorable experiences" on the Prolific platform. Participants were informed that they would be paid a rate

of \$10.50/hour or approximately \$1.75 to complete the survey. Other than recruitment differences, the procedure for the Prolific sample mimicked that of the college EFA sample except for the following differences: 1) scales’ responses were set to force-response, so if a participant skipped a question they would be required to answer the question before proceeding to the next page (or exiting the survey), 2) a few additional questions were included for exploratory purposes, and 3) as described above, 27 (rather than 35) potential Presence Scale items were administered based on the results of Study 1. Participants were not given the full set of validity scales that were administered in Study 1.

Results

The 27 potential Presence items were analyzed in R version 4.2.1 using the *psych* and *lavaan* packages (R Core Team, 2019; Revelle, 2023; Rosseel, 2012). Item means, standard deviations, and inter-item correlations were assessed and shown according to their three-factor model groupings in Tables 15-17.

Table 15

Means, Standard Deviations, and Correlations of the Stillness of Mind Items in Study 2: U.S. National EFA Sample

Item	<i>M</i>	<i>SD</i>	1	2	3	4
1. ST1	5.17	1.80				
2. ST2	4.35	1.86	.46			
3. ST3	5.03	1.75	.48	.45		
4. ST4	5.16	1.75	.40	.35	.38	
5. ST5	5.43	1.58	.67	.41	.45	.36

Note. $N = 384$. M and SD are used to represent mean and standard deviation, respectively. All inter-item correlations were significant, below $p = .05$. See Table 9 to read the items that correspond with each item label.

Table 16

Means, Standard Deviations, and Correlations of the Present Moment Awareness and Openness to What Is Items in Study 2: U.S National EFA Sample

Item	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
1. PMA1	5.72	1.45									
2. PMA2	5.51	1.41	.30								
3. PMA3	5.41	1.45	.31	.44							
4. PMA4	5.32	1.58	.51	.46	.36						
5. PMA5	5.70	1.38	.49	.49	.42	.49					
6. OP1	5.98	1.35	.47	.27	.41	.27	.31				
7. OP2	5.96	1.32	.52	.34	.39	.46	.40	.56			
8. OP3	6.06	1.19	.48	.33	.36	.35	.35	.51	.55		
9. OP4	4.75	1.89	.28	.16	.28	.24	.16	.24	.27	.26	
10. OP7	6.02	1.10	.43	.39	.38	.41	.42	.50	.50	.55	.30

Note. $N = 384$. *M* and *SD* are used to represent mean and standard deviation, respectively. All inter-item correlations were significant, below $p = .05$. See Table 9 to read the items that correspond with each item label.

Table 17

Means, Standard Deviations, and Correlations of the Expansion of Consciousness and Merging of Self Items in Study 2: U.S. National EFA Sample

Item	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11
1. EXP1	4.67	1.91											
2. EXP2	4.47	1.95	.68										
3. EXP3	4.70	1.88	.73	.71									
4. EXP4	4.48	1.93	.60	.60	.58								
5. EXP5	4.54	1.89	.70	.69	.60	.60							
6. EXP6	4.77	1.90	.63	.63	.58	.74	.63						
7. MER1	5.05	1.76	.55	.57	.62	.60	.56	.58					
8. MER2	4.94	1.82	.57	.57	.58	.55	.56	.53	.57				
9. MER3	4.66	1.87	.60	.61	.61	.49	.55	.52	.58	.68			
10. MER4	4.71	1.96	.61	.61	.57	.56	.59	.62	.59	.65	.63		
11. MER5	4.31	1.98	.59	.69	.58	.56	.62	.62	.56	.59	.61	.63	
12. MER6	5.70	1.41	.47	.46	.45	.41	.49	.40	.43	.51	.45	.52	.45

Note. $N = 384$. *M* and *SD* are used to represent mean and standard deviation, respectively. All inter-item correlations were significant, below $p = .05$. See Table 9 to read the items that correspond with each item label.

Tests of dimensionality underlying the original hypothesized five lower-order factors were assessed using the same process described in the Study 1 results section. Dimensionality results and EFAs on subsets of the data from the Prolific sample mimicked the findings from Study 1. Exploratory factor analyses were conducted using the same procedure as in Study 1. One-factor models were fitted to each of factors and were found to explain a minimum of 43.3% of the variance.

Next, EFAs were performed on the 27 items and, once again, a hierarchical model with three lower-order factors was the strongest. The Schmid-Leiman item rotation was utilized to uncover this hierarchical structure (Schmid & Leiman, 1957). See Table 18 for loading results from the exploratory factor analysis. 59% of the variance in the items could be attributed to the hierarchical factor, or Presence. The scale exhibited strong reliability: Cronbach’s $\alpha = 0.94$; Ω Total = 0.96.

Table 18

Item Loading Results for Study 2: U.S. National EFA Sample

Item	Factor loading			g*
	1	2	3	
Factor with ST items				0.54
1. My mind felt like a calm, clear lake	0.16	0.00	0.72	
2. If you let a bucket of sandy water sit, the water becomes clear as the sand settles. It felt like my mind experienced something like that	0.32	-0.06	0.45	
3. There were moments when my mind felt still	0.20	0.10	0.44	
4. My mind was free from inner dialogue	0.11	0.12	0.41	
5. My mind felt settled	-0.08	0.21	0.72	
Factor with PMA & OP items				0.71
1. I sensed at the time that I was fully alive in that moment	0.17	0.49	0.21	
2. Even as I was immersed in the experience, there was a part of me that was aware of it	0.11	0.57	-0.16	
3. I was immersed in the experienced without getting lost in it	-0.02	0.57	0.07	

4. It was like I was aware of everything, moment by moment	0.30	0.48	-0.05	
5. I was conscious of myself experiencing the moment	0.06	0.62	-0.06	
6. I welcomed what was happening to me for what it was	-0.05	0.58	0.23	
7. My heart was open to the full experience	0.13	0.58	0.15	
8. I found myself receptive to the experience as it unfolded	-0.07	0.69	0.08	
9. My lack of judgment toward the experience helped me be open to it	0.22	0.15	0.19	
10. I accepted the reality of the experience for what it was	-0.06	0.73	0.04	
Factor with EXP & MER items				0.78
1. I felt a part of myself expanding outward	0.81	0.05	-0.05	
2. My consciousness extended outward as if toward a horizon	0.87	-0.08	0.02	
3. My consciousness expanded	0.78	0.04	-0.02	
4. I felt limitless	0.68	-0.01	0.17	
5. The core of my being radiated outward	0.79	-0.02	0.03	
6. A part of me felt boundless	0.74	-0.06	0.17	
7. I felt a deep sense of oneness	0.58	0.10	0.21	
8. I became a part of something greater than myself	0.70	0.19	-0.14	
9. My sense of self faded as I became part of something greater	0.72	0.08	-0.04	
10. I seemed to merge with something beyond myself	0.79	0.07	-0.10	
11. I felt my self merging with everything, as though I were a wave that merged back into the ocean	0.75	-0.03	0.10	
12. I felt a part of it all	0.33	0.50	-0.07	

Note. * these *g* loadings pertain to the loading for the Presence high-order factor. Factor loadings above 0.3 are in bold. The numbers next to each item are listed to indicate the number of items in each factor, not the item ID number.

Reconceptualization with the New Hierarchical Model

Exploratory factor analyses in both Study 1 and Study 2 indicated a hierarchical model with Presence, the higher-order factor, and three lower-order factors. This empirical evidence prompted our team to conceptually revise our factor names of Presence. Examining the lower-order factors, the hypothesized Stillness of Mind items composed one factor. Another factor was

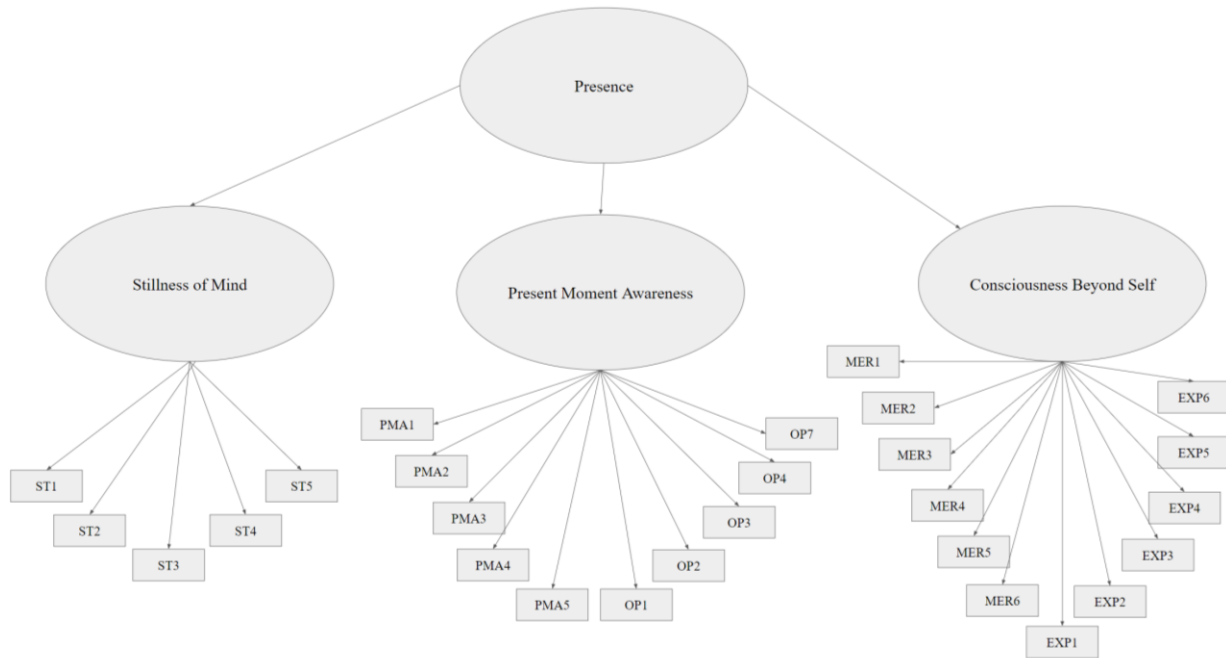
composed of items from the two hypothesized factors: Present Moment Awareness and Openness to What Is. Finally, Expansion of Consciousness and Merging of Self items made up a third factor. Given that this pattern illustrated in Figure 7 occurred in two different samples, the conceptualization of Presence needed to be revised by combining the factors that we had hypothesized would differentiate.

The updated three lower-order factors of Presence are *Stillness of Mind*, *Present Moment Awareness*, and *Consciousness Beyond Self* (see Figure 19 for the full model). Although these changes to our hypothesized model of Presence were spurred by empirical evidence, we thoroughly considered the conceptual implications of the newly revised Present Moment Awareness and Consciousness Beyond Self factors. Each factor's definition and an explanation of our changes are provided below.

Figure 19

Three-Factor Hierarchical Conceptual Model of Presence before Study 3: U.S. National CFA

Sample



Note. Boxes represent items. See Table 9 for a list of which item corresponds to which item label.

Stillness of Mind occurs when discursive thinking subsides and the mind is clear, calm, and settled. This definition did not change during this conceptual revision phase.

Present Moment Awareness occurs when one is open to and aware of the now, of the present moment, of being, even if one is involved in activity. This factor was created by combining the original Present Moment Awareness and Openness to What Is factors. The word “open” was intentionally added into a revised version of the Present Moment Awareness definition. Similarly, “of being” was added to the new definition of this factor to emphasize one’s awareness of their being aware of the present moment, rather than awareness of or attention to the object of one’s experience. Just as with our earlier conceptualization of Present Moment Awareness, an important distinction made in this factor is that one is not *immersed* in

the present moment such that one is lost in the moment and no longer aware of the moment. For example, one could be immersed in reading a great book or playing a video game with friends—one is fully in the present moment, but not aware of that present moment, they are instead in a reality of their own and chasing the next moment. In contrast, one could be aware of the present moment as they pause in an eddy of a river while kayaking, non-judgmentally noticing the buoyancy of their boat, the cool water shimmering down their paddle, the sun on the back of their neck, and the damp smell of the riverbank nearby. Thus, in combining Present Moment Awareness with Openness to What Is, the emphasis in this factor was on an open awareness of *awareness* of the present moment. Any thoughts or judgments of the present moment are simply accepted—though not necessarily condoned—for what they are.

Consciousness Beyond Self occurs when one's consciousness seems to expand beyond the confines of the body and mind, and potentially the self merges—one experiences becoming One—with another entity or realm. Consciousness Beyond Self was created by theoretically combining our hypothesized factors Merging of Self and Expansion of Consciousness. Note that the words “expand” and “merges” are used in relation to consciousness and the self, respectively. Furthermore, the words “consciousness” and “self” in the factor name draw upon the factor names Expansion of Consciousness and Merging of Self, respectively. From early in our conceptualization of Presence, we recognized that the factors Merging of Self and Expansion of Consciousness could be considered two sides of the same coin. As one's sense of self merges with something beyond the self, one's consciousness could also be thought to be expanding toward or into that something, and vice versa. The revised factor Consciousness Beyond Self remains agnostic to whether one experiences an extension of their consciousness beyond themselves as more of a sense of merging or of expansion. These forms of Consciousness

Beyond Self are also reflected in our definition of Presence: “In this state, one can experience one’s consciousness as expanding, and one’s self as becoming part of something larger than the self.” One might experience this factor as their mind and consciousness expanding to access ideas, experiences, or realms they previously had not encountered. If one had delineated boundaries between oneself and what is not oneself, they may experience those boundaries as being blown open, and perhaps an abundant sense of freedom. The sense of merging involves identification with who or what is typically “other,” whether that be the surrounding environment, a friend, a romantic partner, or a higher being. This identification may be complete, such that the idea of self and other is no longer relevant. The merging may also be experienced as love, devotion, or simply warmth toward the other.

Item Elimination

Item elimination was approached through a tandem strategy balancing statistics and conceptual considerations in order to avoid construct underrepresentation. If a factor measures one specific aspect well but does not represent the full extent of that factor, then construct underrepresentation has occurred. This poses a threat to validity (Messick, 1989). Thus, when combining Present Moment Awareness and Openness to What Is factors into Presence Moment Awareness, and Expansion of Consciousness and Merging of Self into Consciousness Beyond Self, we sought to ensure that these new factors contained a balanced number of items from each of their original hypothesized factors in order to adequately represent both of the previously hypothesized factors.

Items were eliminated through a careful, deliberative process. The statistically worst-performing items, such as those with low loadings, high error, and cross-loadings, were identified early on as contenders for deletion. These results were presented to the research team.

When the team agreed conceptually that none of these items recommended for deletion were paramount to their respective for or to Presence, EFAs were performed with a smaller subset of items. For the latter part of the item deletion process, Confirmatory Factor Analyses (CFAs) were also employed. Specifically, models were assessed with the same number of items (e.g., 20 items), but different groups of items were either included or excluded. Examining preliminarily fit indices for these models provided information regarding how including or deleting one item as opposed to another item might affect or improve fit in both the exploratory college and Prolific samples. After deciding to omit an item, new models with one fewer item (e.g., 19 items) were assessed and this process was repeated. At certain stages, modification indices were examined and led to two items (EXP4 and EXP6) with an error covariance being cut (see Table 19 for an explanation). Although we are aware of the issues stemming from overfitting, these two samples were exploratory in nature, and a new sample was planned to be collected as the final stage of the Presence Scale development. This statistical process repeated in conjunction with meetings with the full research team until the Presence Scale was narrowed down to 14 items. Table 19 below explains the reasoning for each item’s deletion in order of when the item was deleted.

Table 19

Presence Item Deletion Process: Moving from 35 Items to the Final 14 Items

Hypothesized Factor	Item(s) Administered in EFAs	Reasoning for Deletion
Present Moment Immersion	PM-i1 - My whole being was involved in the moment	Note: These items were deleted early on during the EFAs, such that the final EFA results did not include these. Below we reiterate the reasoning for why these items were cut.

	PM-i2 - Nothing seemed to exist outside of the present moment	Present-Moment Immersion items were piloted to test whether they differentiated from Present-Moment Awareness items. Conceptually we believed that they were different and wanted to assess empirically whether this would occur.
	PM-i3 - I felt fully immersed in the moment	After finding that they differentiate statistically, we had sufficient empirical and conceptual support to deletion all of the Present Moment Immersion items.
Present Moment-Related Contenders	PM-1 -Whatever I experienced brought me into the present moment	Note: These items were deleted early on during the EFAs, such that the final EFA results did not include these. Below we reiterate the reasoning for why these items were cut.
	PM-2 - I was simply in the now, not preoccupied with the past or future	These Present Moment related items were piloted to test whether they were more closely related to Present-Moment Awareness or Present Moment Immersion. Statistically, they we more closely related to the Present Moment Immersion items. This conceptual and empirical support prompted deletion of all Present Moment Contender items.
	PM-3 - I wasn't thinking about what would happen next	
Openness to What Is (New: Present Moment Awareness)	OP5 - I felt that I had opened up to a reality beyond my normal life	Note: These items were deleted early on during the EFAs, such that the final EFA results did not include these. Below we reiterate the reasoning for why these items were cut.
	OP6 - I felt that I had awakened to a reality different from my everyday experience	Ultimately deleted for statistical reasons: An EFA of the Openness to What Is items in both the College and Prolific samples indicated a 2-factor solution, with these two items grouping together as their own factor. Correlation plots indicated these items were correlating more so with the Expansion of Consciousness and Merging of Self items as opposed to the Openness to What Is Items. Confirming this, OP5 and OP6 were grouping with the Consciousness Beyond Self factor (EXP & MER items) in an EFA of all items. Rationale for this decision: These items were added shortly before the final round and the team had mixed reactions to these items. However, upon re-examination, the

language “reality beyond my normal life” or “reality different from my everyday experience” is well-outside of the bounds of the Openness to What Is factor.

Openness to What Is (New: Present Moment Awareness) OP4 - My lack of judgment toward the experience helped me be open to it

Ultimately deleted for statistical reasons: In the full EFA of the remaining items, this item’s loading was the lowest, below .3, and it had the lowest communalities and high error.

Rationale for this decision: Non-judgment may likely be outside of the bounds of the Openness to What is and Presence. Additionally, it is also more taxing for participants to interpret and respond to this negatively worded item, as well as it may be hard to be aware to what extent one was lacking judgment.

Merging of Self (New: Consciousness Beyond Self) MER6 - I felt a part of it all

Ultimately deleted for statistical reasons: In a full EFA, in both the college and Prolific sample, this item had a cross loading with the Consciousness Beyond Self factor and the Present Moment Awareness Factor. Its loading was below .3 for its hypothesized factor, and under .4 for the Present Moment Awareness Factor.

Rationale for this decision: MER5 is a better item to help understand how one feels “a part of it all.” This item also may not be inclusive of Merging of Self experience that aren’t with everything and are with another person, being, or activity.

Expansion of Consciousness (New: Consciousness Beyond Self) EXP4 - I felt limitless
EXP6 - A part of me felt boundless

Ultimately deleted for statistical reasons: Modification Indices indicated that an error covariance was occurring between EXP 4 and EXP6, which was reducing CFA model fit.

Rationale for this decision: Other EXP items are stronger. Additionally, the language “limitless” in EXP4 may be confusing and vague. The error covariance is conceptually plausible given these two items use similar words “limitless” and “boundless” which are feelings that are relatively abstract and have extremely similar meanings. This conceptually is less central to the core of the Consciousness Beyond Self factor.

Merging of Self (New: Consciousness Beyond Self) MER1 - I felt a deep sense of oneness

Ultimately deleted for statistical reasons: After cutting all of the items in the rows above in this table, the loading for this item, MER1, was lowest in the Consciousness Beyond Self factor.

		Rationale for this decision: This item might be too broad and other items in this factor are stronger.
Present Moment Awareness (New: Present Moment Awareness)	<p>PMA2 - Even as I was immersed in the experience, there was a part of me that was aware of it</p> <p>PMA3 - I was immersed in the experienced without getting lost in it</p>	<p>Ultimately deleted for statistical reasons: These items within the new Present Moment Awareness factor exhibited the lowest item reliability (under .4 for the Prolific sample, under .3 in the college sample).</p> <p>Rationale for this decision: Other items in the factor, such as PMA5 may better measure Present Moment Awareness. Some individuals might not understand what “getting lost in it” means and the two-part structure of these items can be harder for respondents to answer.</p>
Openness to What Is (New: Present Moment Awareness)	<p>OP7 - I accepted the reality of the experience for what it was.</p> <p>PMA4 - It was like I was aware of everything, moment by moment</p>	<p>Ultimately deleted for statistical reasons: We aimed to have five items in this factor, and when testing options of which five items from the seven contenders left, the five items not containing these two items had better CFA fit indices than other models of five items.</p> <p>Rationale for this OP7 decision: The phrase “accepted the reality” could be referring to something gloomy or neutral, which contrasts the definition of Presence as life-affirming.</p> <p>Rationale for this PMA4 decision: PMA5 is likely conceptually stronger. The word “everything” might be difficult for some people to respond to as well.</p>
Stillness of Mind	<p>ST2 - If you let a bucket of sandy water sit, the water becomes clear as the sand settles. It felt like my mind experienced something like that.</p>	<p>Ultimately deleted for statistical reasons: Unlike the other Stillness of Mind Items, this item had a weak cross-loading with the Consciousness Beyond Self items. Removing ST2 also improved CFAs fit indices of the Presence Model.</p> <p>Rationale for this decision: This two-sentence item is the longest in the scale and thus demands more cognitive resources to interpret. The process of the sand settling is rather lengthy, and this metaphor might not be as helpful for participants who were reflecting back on a brief experience.</p>
Expansion of Consciousness (New:	<p>EXP5 - The core of my being radiated outward</p>	<p>Rationale for deletion: All the remaining Consciousness Beyond Self items were strong with high reliability. This item was cut because the research team were less drawn to the words “radiated” and “core of my being”. Originally this</p>

Consciousness Beyond Self)		language was included in hopes of finding other ways to address the idea of consciousness and expansion, but this back-up version was not needed.
Merging of Self (New: Consciousness Beyond Self)	MER2 - I became a part of something greater than myself	Rationale for deletion: This item was redundant with item, MER3, which also address “part of something greater.” MER3 was stronger because it also included the sense of self fading and that item was included in the final scale.
Expansion of Consciousness (New: Consciousness Beyond Self)	EXP3 - My consciousness expanded	Rationale for deletion: We wanted the Consciousness Beyond Self factor to have the same number of items as Present Moment Awareness. When looking at all of the items, EXP1, EXP2, and EXP3 seemed redundant with one another. Specifically, the words “expand” and “consciousness” are used in the other items, so this EXP3 item was not adding anything new. Additionally, it is best to minimize the word “consciousness” whenever possible as it is not inherently simple to understand. The other EXP item has additional language to guide the reader whereas this item has no additional guidance or information.

The final Presence Scale contains four Stillness of Mind items, five Present Moment Awareness items, and five Consciousness Beyond Self items, as shown in Table 20.

Table 20

Finalized Presence Scale Items, Item Labels, and Corresponding Factors

Item	Item Label	Factor
My mind felt like a calm, clear lake	ST1	Stillness of Mind
There were moments when my mind felt still	ST3	
My mind was free from inner dialogue	ST4	
My mind felt settled	ST5	
I sensed at the time that I was fully alive in that moment	PMA1	
I was conscious of myself experiencing the moment	PMA5	
I welcomed what was happening to me for what it was	OP1	
My heart was open to the full experience	OP2	
I found myself receptive to the experience as it unfolded	OP3	
I felt a part of myself expanding outward	EXP1	Consciousness Beyond Self
My consciousness extended outward as if toward a horizon	EXP2	
My sense of self faded as I became part of something greater	MER3	
I seemed to merge with something beyond myself	MER4	
I felt my self merging with everything, as though I were a wave that merged back into the ocean	MER5	

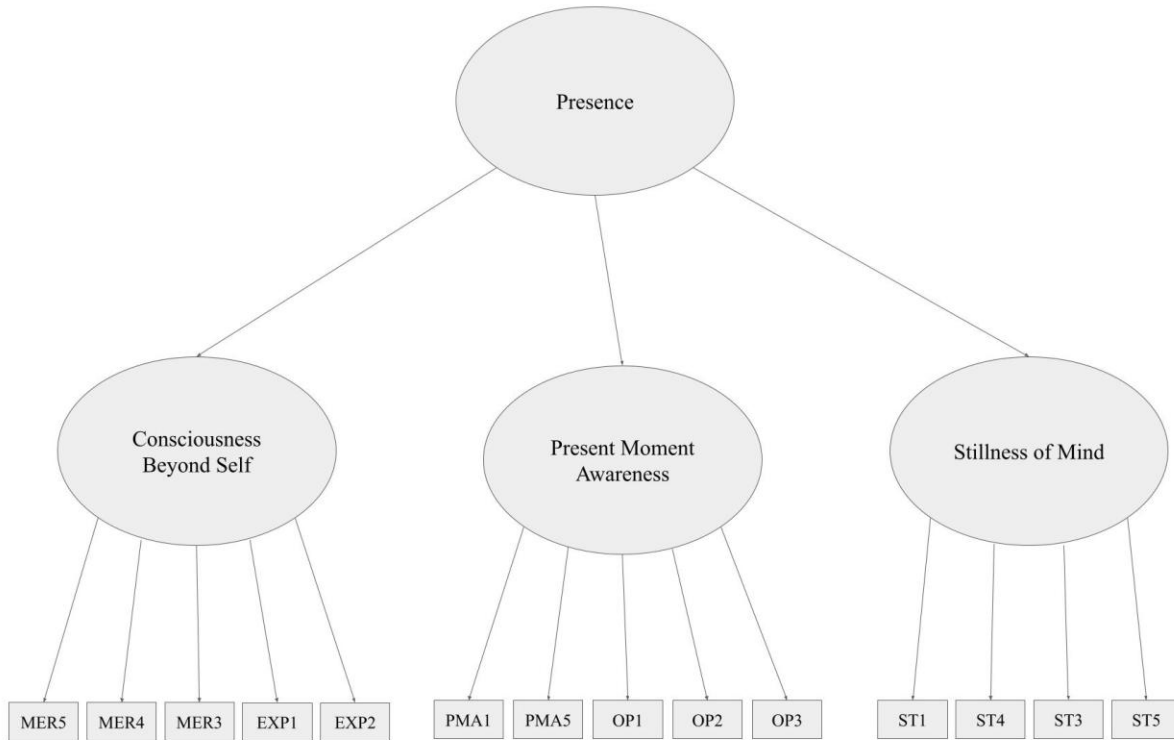
Note. Item labels listed in column 2 correspond to the same item labels presented in Table 9.

The Stillness of Mind factor was conceptually narrower in scope, thus not requiring quite as many items as the other factors. From a statistical perspective, more items could have been retained within the Consciousness Beyond Self factor as many of those items exhibited strong psychometric properties. However, we purposely chose to have this factor contain the same number of items as Present Moment Awareness factor because we considered these two factors to be of equal conceptual importance and neither was conceptually broader or narrower than the other.

At this stage, our team had an agreed-upon model of Presence and its final items (see Figure 20), that we would test with a new sample national of the U.S.

Figure 20

Finalized Conceptual Model of Presence



Note. Presence is the higher-order factor. The three lower-order factors are Stillness of Mind, Present Moment Awareness, and Consciousness Beyond Self. The boxes represent items. See Table 9 or 20 for a list of which item corresponds to which item label.

Study 3: Confirmatory Study with U.S National Sample

Method

Participants

A U.S. national sample ($N = 604$) were recruited from the Prolific platform. This sample size was determined through Monte Carlo simulations using the *SimSem* package in R version 4.2.1 to estimate power (Pornprasertmanit et al., 2021; R Core Team, 2019). Confirmatory Factor Analyses (CFA) on the combined samples of Studies 1 and 2 were assessed to obtain parameter estimates for the power analysis. These simulations specified that a sample size

between 500-600 would be sufficiently powered to detect misfit. Three participants had incomplete qualitative data such that it was unclear whether they were following the directions and had an experience in mind and were omitted, thus leaving a total sample of 601 adults.

Participants ranged from 18 to 80 years old ($M = 44.47$, $SD = 15.64$). 49.25% of participants identified as female, 47.92% identified as male, 1.99% identified as non-binary, and 0.83% selected 'other' or 'prefer not to respond'. The racial/ethnic breakdown of the sample was as follows: White (72.88%), Black or African American (12.81%), Two or more races (5.32%), Asian (4.83%), Hispanic or Latino/a/x (3.00%), 'other' or 'prefer not to say' (0.83%), Native American, American Indian or Alaskan Native (0.3%). 12.27% of participants were fluent in multiple languages. Participants responded from 45 US states, with similar proportions per region to the US census: Northeast (16.64%), Midwest (17.30%), South (43.26%), West (22.80%). Over half (52.75%) of participants had at least a four-year college degree.

Procedure

Participants who did not previously participate in Study 2 were invited to complete the survey titled, "A study of memorable experiences" on the Prolific platform in the winter of 2023. Participants were informed that they would be paid a rate of \$10.50/hour or approximately \$3.85 to complete the survey. Other than recruitment differences, the procedure mimicked that of Studies 1 and 2; however, additional scales were administered to all participants. After completing the Presence Scale (see [Appendix K](#)), participants were asked to keep their experience in mind while responding to state measures of mindfulness, flow, ego-dissolution, nondual awareness, and rumination (see [Appendices D-J](#)). The order of these state measures was randomized for each participant. Then, participants were told to think about how they generally feel and completed a trait measure of self-reflection and insight (see [Appendix I](#)). All of these

scales were set to force-response, so if a participant skipped a question they would be asked to answer the question before proceeding to the next page (or exiting the survey).

Information about these scales can be found in the methods section of Study 1. Reliability as measured by Cronbach’s alpha and omega were adequate to strong for all measures:

mindfulness: Curiosity factor items ($\alpha = 0.91$; Ω total = 0.93), and mindfulness Decentering factor items ($\alpha = 0.76$; Ω total = 0.82); flow items ($\alpha = 0.93$; Ω total = 0.95); ego-dissolution items ($\alpha = 0.89$; Ω total = .93); nondual awareness items ($\alpha = 0.91$); rumination items ($\alpha = 0.91$; Ω total = 0.94); self-reflection and insight: insight factor items ($\alpha = 0.86$; Ω total = 0.90) and self-reflection factor items ($\alpha = 0.93$; Ω total = 0.95).

Results

Data were analyzed in R version 4.2.1 using the *psych* and *lavaan* packages (R Core Team, 2019; Rosseel, 2012; Revelle, 2023). Descriptive statistics and inter-item correlations of the Presence items are shown below in Table 21.

Table 21

Means, Standard Deviations, and Correlations of the Presence Scale Items in Study 3: U.S.

National CFA Sample

Item	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12	13
1. ST1	5.39	1.66													
2. ST3	5.25	1.65	.63												
3. ST4	5.19	1.74	.54	.51											
4. ST5	5.64	1.43	.67	.60	.57										
5. PMA1	5.92	1.31	.44	.44	.41	.44									
6. PMA5	5.87	1.33	.30	.37	.27	.31	.54								
7. OP1	6.02	1.28	.41	.39	.42	.50	.57	.45							
8. OP2	6.06	1.26	.40	.36	.43	.47	.59	.43	.66						
9. OP3	6.04	1.19	.34	.34	.39	.44	.56	.43	.59	.62					
10. EXP1	4.87	1.85	.42	.45	.35	.38	.46	.32	.31	.38	.32				
11. EXP2	4.62	1.90	.46	.45	.34	.38	.38	.31	.26	.33	.32	.68			
12. MER3	4.74	1.84	.38	.41	.39	.36	.41	.31	.32	.34	.31	.60	.62		

13. MER4	4.75	1.89	.44	.49	.38	.37	.47	.33	.32	.37	.33	.71	.67	.64
14. MER5	4.55	1.90	.47	.44	.36	.38	.43	.29	.27	.29	.30	.62	.70	.65 .69

Note. *M* and *SD* are used to represent mean and standard deviation, respectively. All inter-item correlations were significant, below $p = .05$. See Table 9 or 20 for a list of which item corresponds to which item label.

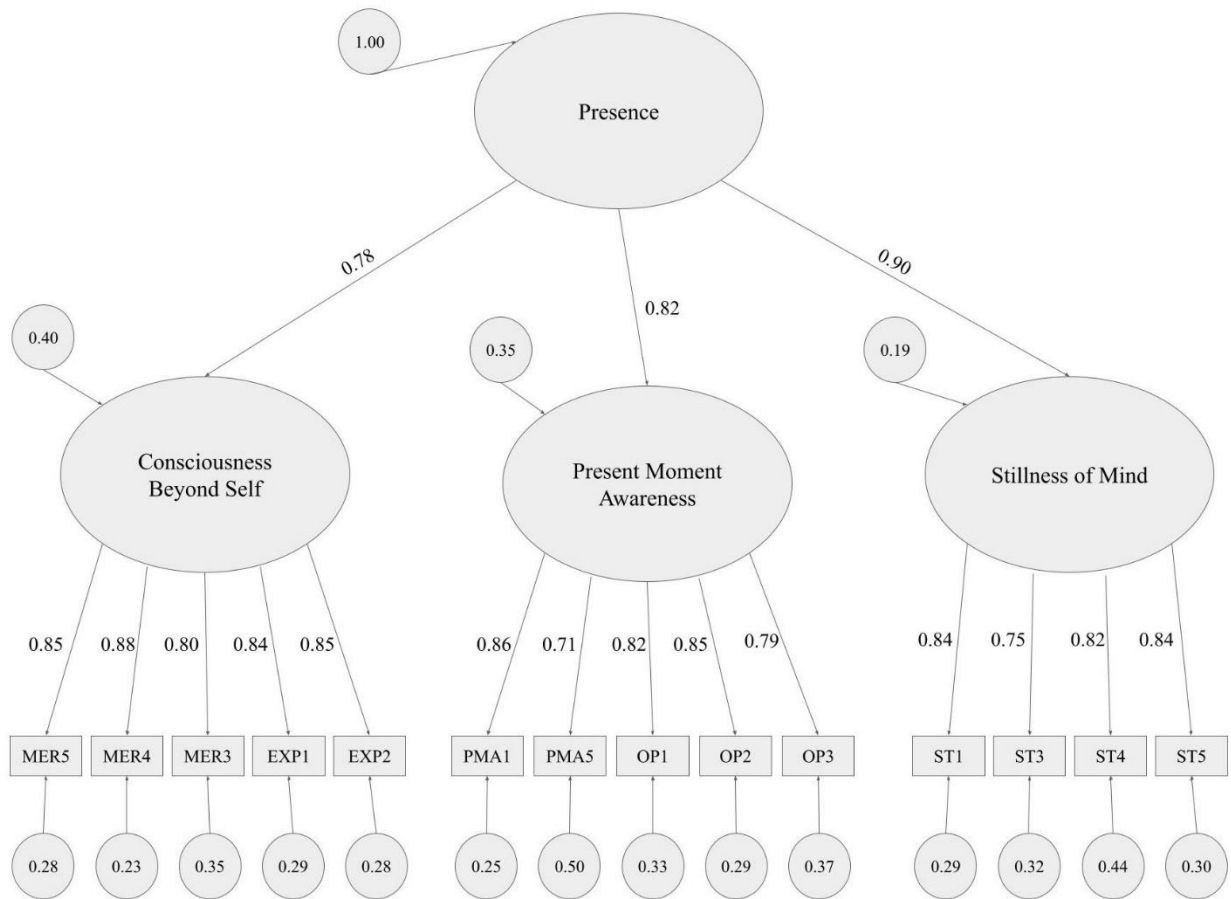
The Presence Scale exhibited strong reliability both when examining Presence total scores (Cronbach’s $\alpha = 0.91$; Ω total = 0.94) as well as examining the individual factors: Stillness of Mind (Cronbach’s $\alpha = 0.84$; Ω total = 0.86), Present Moment Awareness (Cronbach's $\alpha = 0.86$; Ω total = 0.88), and Consciousness Beyond Self (Cronbach’s $\alpha = 0.91$; Ω total = 0.92).

Part 1: Presence Scale Confirmatory Factor Analysis

Confirmatory factor analyses (CFA) were conducted on the 14 Presence items with Presence as the higher-order factor and Stillness of Mind, Present Moment Awareness, and Consciousness Beyond Self as the lower-order factors. Weighed Least Squares adjusted for Means and Variances (WLSMV), as recommended for categorical indicators, was utilized in order to prevent biased loadings. The obtained results: CFI (Comparative Fit Index) of 0.988, RMSEA (Root Mean Squared Error of Approximation) of 0.058, and SRMR (Standardized Root Mean Square Residual) of 0.032, all passed the Hu and Bentler (1999) criteria of $CFI > 0.95$, $RMSEA < 0.06$, and $SRMR < 0.08$, meaning the data fit our hypothesized model. A completed path diagram depicting the CFA results is presented in Figure 21.

Figure 21

CFA Path Diagram of the Presence Scale for Study 3: U.S. National Sample.



Note. See Table 9 or Table 20 for a list of which item corresponds to which item label.

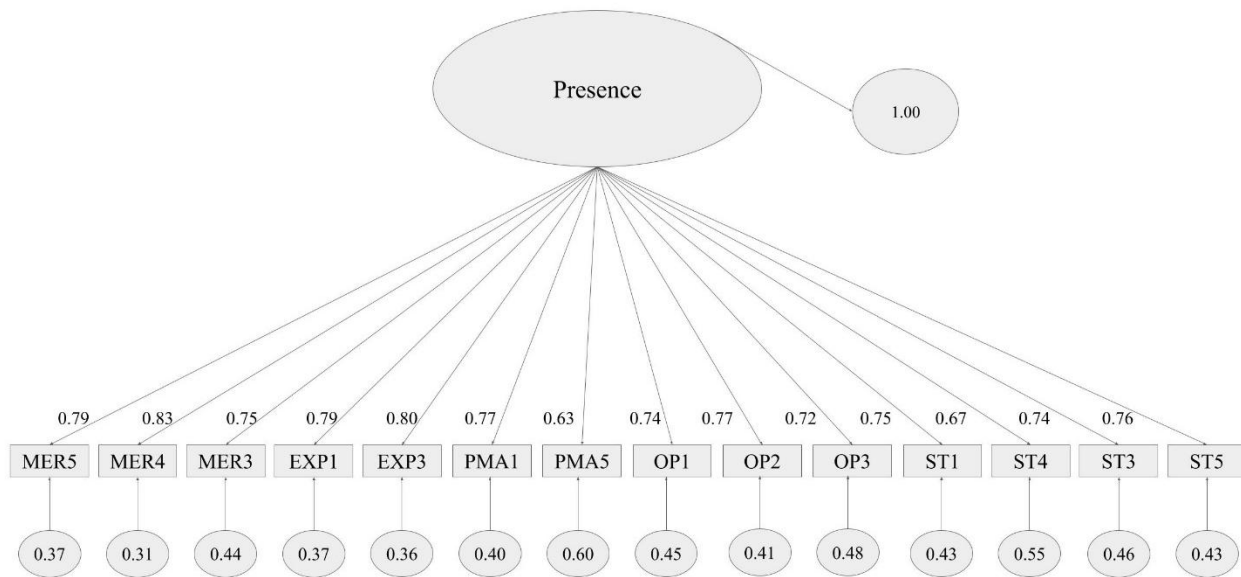
Part 2: Competing Models of Presence

To provide further credibility to the hierarchical three-factor model of Presence, two competing models were analyzed: a one-factor model and a two-factor non-hierarchical model. One plausible model is a single factor model of Presence without lower-order factors. Evaluating this model is important because adequate fit would suggest that Presence is unidimensional, thereby calling into question the necessity of the lower-order factors (see Figure 22 for CFA path diagram of this model). Results indicated that the unidimensional model of Presence had poor

model fit: $\chi^2(77) = 1705.47, p < 0.001, CFI = 0.868, RMSEA = 0.188, SRMR = 0.108$. The hierarchical three-factor model of Presence had significantly better fit than this unidimensional model of Presence: $\Delta\chi^2(3) = 400.65, p < 0.001$.

Figure 22

CFA Path Diagram of a Competing Model of Presence: A Unidimensional Model



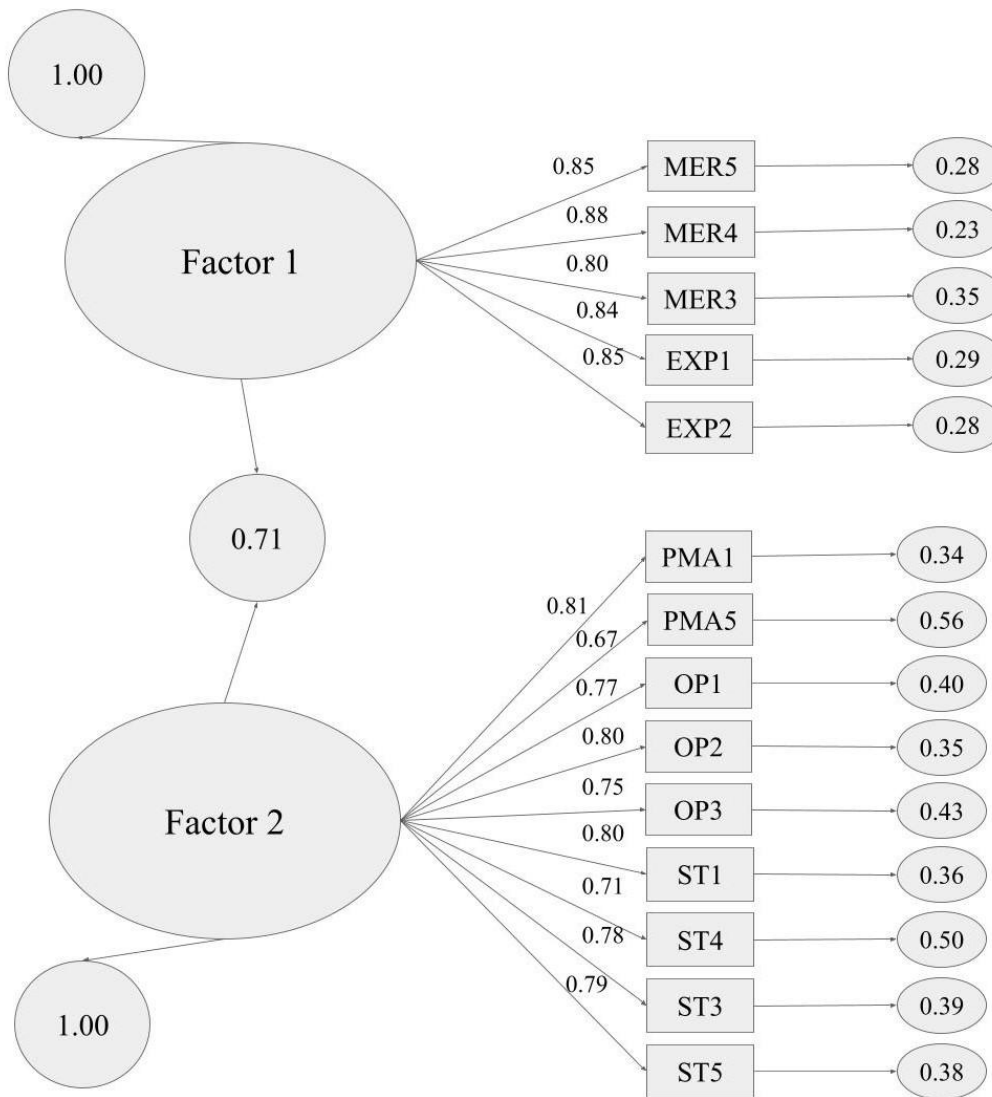
Note. See Table 9 or 20 for a list of which item corresponds to which item label.

A two-factor model was tested next. In this model, the first factor is composed of Stillness of Mind and Present Moment Awareness items and the second factor is composed of Consciousness Beyond Self items. The Consciousness Beyond Self items may be viewed as substantially different from the other items, thus, it is important to test this model since evidence in its favor would imply that the 14 items measure two related, but distinct constructs as opposed to our hypothesized model of Presence. Note that hierarchical models cannot be tested with only two lower-order factors as this would be a statistically underidentified model. Thus, this competing model does not assume that the higher-order construct of Presence exists; rather, the Presence items measure two correlated but separate constructs. Results indicated that this

competing model, $\chi^2(76) = 705.62, p < 0.001, CFI = 0.949, RMSEA = 0.118, SRMR = 0.065,$
 had significantly worse fit than our hierarchical three-factor model: $\Delta\chi^2(2) = 138.86, p < 0.001$
 (See Figure 23).

Figure 23

CFA Path Diagram of a Competing Model of Presence: A Two-Factor Model



Note. See Table 9 or 20 for a list of which item corresponds to which item label.

Part 3: Validity Analyses

Means and standard deviations of the scales administered for validity purposes are shown in Table 22.

Table 22

Means and Standard Deviations of Items in the Scales Administered for Validity Analyses

Flow Items	<i>M</i>	<i>SD</i>	Flow Items	<i>M</i>	<i>SD</i>
Challenge-Skill Balance			Concentration on Task at Hand		
F_CS1	3.37	1.17	F_CO1	4.20	0.90
F_CS2	3.70	0.94	F_CO2	4.17	0.95
F_CS3	3.92	0.93	F_CO3	3.99	0.93
F_CS4	3.56	1.02	F_CO4	4.14	0.92
Action-Awareness Merging			Paradox of Control		
F_AA1	3.94	0.89	F_CN1	3.91	1.00
F_AA2	3.93	0.97	F_CN2	3.89	0.98
F_AA3	3.70	1.00	F_CN3	3.71	1.06
F_AA4	3.89	0.98	F_CN4	3.95	0.99
Clear Goals			Loss of Self-Consciousness		
F_CG1	4.03	0.93	F_SC1	4.16	1.01
F_CG2	4.08	0.89	F_SC2	4.00	1.04
F_CG3	3.98	0.98	F_SC3	4.08	1.01
F_CG4	3.80	1.06	F_SC4	4.22	1.00
Unambiguous Feedback			Transformation of Time		
F_UF1	3.89	0.90	F_TT1	3.81	1.11
F_UF2	3.57	1.02	F_TT2	3.88	1.08
F_UF3	3.70	1.00	F_TT3	3.50	1.19
F_UF4	3.66	0.96	F_TT4	3.40	1.25
Autotelic Experience					
F_AE1	4.46	0.95			
F_AE2	4.04	1.03			
F_AE3	4.42	0.94			
F_AE4	4.47	0.85			
Mindfulness Items	<i>M</i>	<i>SD</i>	Mindfulness Items	<i>M</i>	<i>SD</i>
Curiosity			Decentering		

M_C1	2.94	1.35	M_D1	3.60	1.26
M_C2	2.98	1.35	M_D2	3.83	1.24
M_C3	2.82	1.37	M_D3	2.78	1.34
M_C4	3.00	1.37	M_D4	3.60	1.17
M_C5	3.49	1.27	M_D5	3.78	1.07
M_C6	2.97	1.35	M_D6	2.91	1.31
			M_D7	2.78	1.40

Ego-Dissolution Items	<i>M</i>	<i>SD</i>	Ego-Dissolution Items	<i>M</i>	<i>SD</i>
EDI1	45.21	33.66	EDI5	43.34	34.07
EDI2	57.66	33.72	EDI6	69.71	30.74
EDI3	59.03	35.12	EDI7	47.32	35.51
EDI4	46.74	34.38	EDI8	42.06	33.73

Rumination Items	<i>M</i>	<i>SD</i>	Rumination Items	<i>M</i>	<i>SD</i>
RUM1	39.67	32.99	RUM5	20.69	28.45
RUM2	20.95	27.91	RUM6	15.49	24.93
RUM3	19.87	27.10	RUM7	14.29	23.89
RUM4	14.45	24.41	RUM8	15.51	24.48

Self-Reflection Items	<i>M</i>	<i>SD</i>	Self-Reflection Items	<i>M</i>	<i>SD</i>
SRIS_SR1	4.48	1.34	SRIS_SR7	4.49	1.42
SRIS_SR2	4.49	1.39	SRIS_SR8	4.54	1.18
SRIS_SR3	4.34	1.20	SRIS_SR9	4.43	1.18
SRIS_SR4	4.44	1.34	SRIS_SR10	4.51	1.16
SRIS_SR5	4.42	1.18	SRIS_SR11	4.37	1.26
SRIS_SR6	4.43	1.24	SRIS_SR12	4.48	1.13

Insight Items	<i>M</i>	<i>SD</i>	Insight Items	<i>M</i>	<i>SD</i>
SRIS_IN1	4.91	0.89	SRIS_IN5	4.49	1.34
SRIS_IN2	4.44	1.33	SRIS_IN6	4.49	1.37
SRIS_IN3	4.55	0.99	SRIS_IN7	4.20	1.42
SRIS_IN4	3.98	1.43	SRIS_IN8	4.45	1.13

Nondual Awareness	<i>M</i>	<i>SD</i>	Nondual Awareness	<i>M</i>	<i>SD</i>
NDA1	6.75	2.72	NDA3	7.86	2.48
NDA2	6.16	2.95			

Confirmatory Factor Analyses of Related Scales. As shown in Table 23, CFAs were individually conducted on the related scales to assess whether the expected model would fit these data.

Table 23

CFA Results for Presence, Mindfulness, Flow, Ego-Dissolution, Rumination, Self-Reflection and Insight

Construct(s)	Normal-Theory Chi-square	Robust Chi-square	Degrees of Freedom	p-value	CFI	RMSEA	SRMR
Presence	116.024	223.701	74	0.000	0.988	0.058	0.032
Mindfulness	391.745	655.398f	64	0.000	0.945	0.124	0.072
Flow	1722.691	1384.654	584	0.000	0.906	0.098	0.048
Ego-Dissolution	112.887	77.116	20	0.000	0.968	0.069	0.044
Rumination	146.193	65.530	20	0.000	0.963	0.062	0.034
Self-Reflection and Insight	3592.730	2934.565	169	0.000	0.870	0.165	0.129

Note. $N = 601$. Nondual awareness only has three items and it is just identified, thus fit could not be evaluated through a CFA.

A two-factor model was assessed for the mindfulness items using WLSMV as an estimator to prevent biased loadings from the categorical scale data. CFI and RMSEA values were not within the Hu and Bentler (1999) criteria, meaning that the two-factor model did not fit this data.

A hierarchical nine-factor model was tested for flow. WLSMV was originally used as an estimator; however, a warning message occurred likely because the data were not sufficiently powered for this complex of a model. Thus, Robust Maximum Likelihood (MLR) was utilized as the estimator. Results indicated that CFI and SRMR are not within Hu and Bentler (1999) criteria. Thus, this model did not statistically fit the data.

Notably, although the measure of flow used in this study (the Flow State Scale, Jackson & Marsh, 1996) was not originally presented as a hierarchical model (i.e., with a latent factor of

flow), we proceeded with testing a hierarchical model given the strong internal consistency observed in our preliminary analyses and other literature often discussing flow as a whole. Additionally, we also chose to test this model because we planned to next conduct structural equation modeling analyses to examine the latent correlation between Presence and Flow. Given that our hypotheses about the associations between Presence and Flow are the construct level—not the factor level—if we had used a nine-order non-hierarchical model we would be unable to test the associations between Presence and Flow broadly, which was a primary goal.

A unidimensional model was tested for ego-dissolution using MLR as an estimator. MLR was used to correct for non-normality to prevent biased estimates since those data were skewed. RMSEA of 0.069 was very slightly above the minimum Hu and Bentler (1999) criteria and CFI and SRMR were within Hu and Bentler (1999) criteria. Thus, this model adequately fit the data.

A unidimensional model was tested for rumination using MLR as an estimator. The rumination data were skewed; thus, correcting for non-normality using MLR is appropriate to prevent biased estimates. CFI and SRMR values are within Hu and Bentler (1999) criteria; and the RMSEA was 0.062 was very close to the 0.060 recommendation. Thus, this model adequately fit the data.

A two-factor model was assessed for the self-reflection and insight items using WLSMV as an estimator as the data were categorical. None of these results for CFI, RMSEA, or SRMR meet the standards for model fit as per the Hu and Bentler (1999) criteria; this model poorly fit the data.

It was surprising that many of the scales administered did not perform well in our sample. Perhaps measurement invariance is to blame or perhaps this misfit might be because the validation of these other scales was not done sufficiently. For example, recent work also found

limited evidence for a two-dimensional model fit for the Toronto Mindfulness Scale (Ireland et al., 2019). Although several scales used in the current studies had suboptimal psychometric properties according to their initial validations, particularly in cases where a trait measure was adapted to a state measure, we found that there were few, if any, options for state measures of several of these constructs. Overall, these results suggest that some of these other measures that are widely used in the field may need to be re-examined and re-analyzed using more robust psychometric techniques, particularly when adapting trait measures into state measures.

Additionally, some of the Flow State Scale items used the word “performance,” and although some participants’ experiences were related to performance, this similarly was in the minority of experiences and that could have also contributed error. Although it also might be the case that there was something unique or unusual with our sample, in three different samples (two EFAs and one CFA) the strong psychometric properties of Presence have been consistent.

Structural Equation Models of Presence and Other Scales. In order to assess the associations between Presence and other constructs, structural equation models were tested following the epistemological framework of the nomological networks proposed by Cronbach and Meehl (1955) as an approach to construct validity. These structural equation modeling analyses allow for the associations between the constructs to be assessed at a latent level. Examining model fit in conjunction with latent level correlations provide the information necessary to make inferences regarding Presence’s associations with other constructs. Table 16 shares the results of each of these tests, and Figures 24-29 depict the full path model results of these tests. All of the analyses aside from the Presence and rumination model used WLSMV estimators as categorical data were included in these models. However, due to the skewness and

sparseness of the extreme values in the responses to the Brief State Rumination Inventory, the WLSMV estimator would not run so MLR was used instead.

Table 24

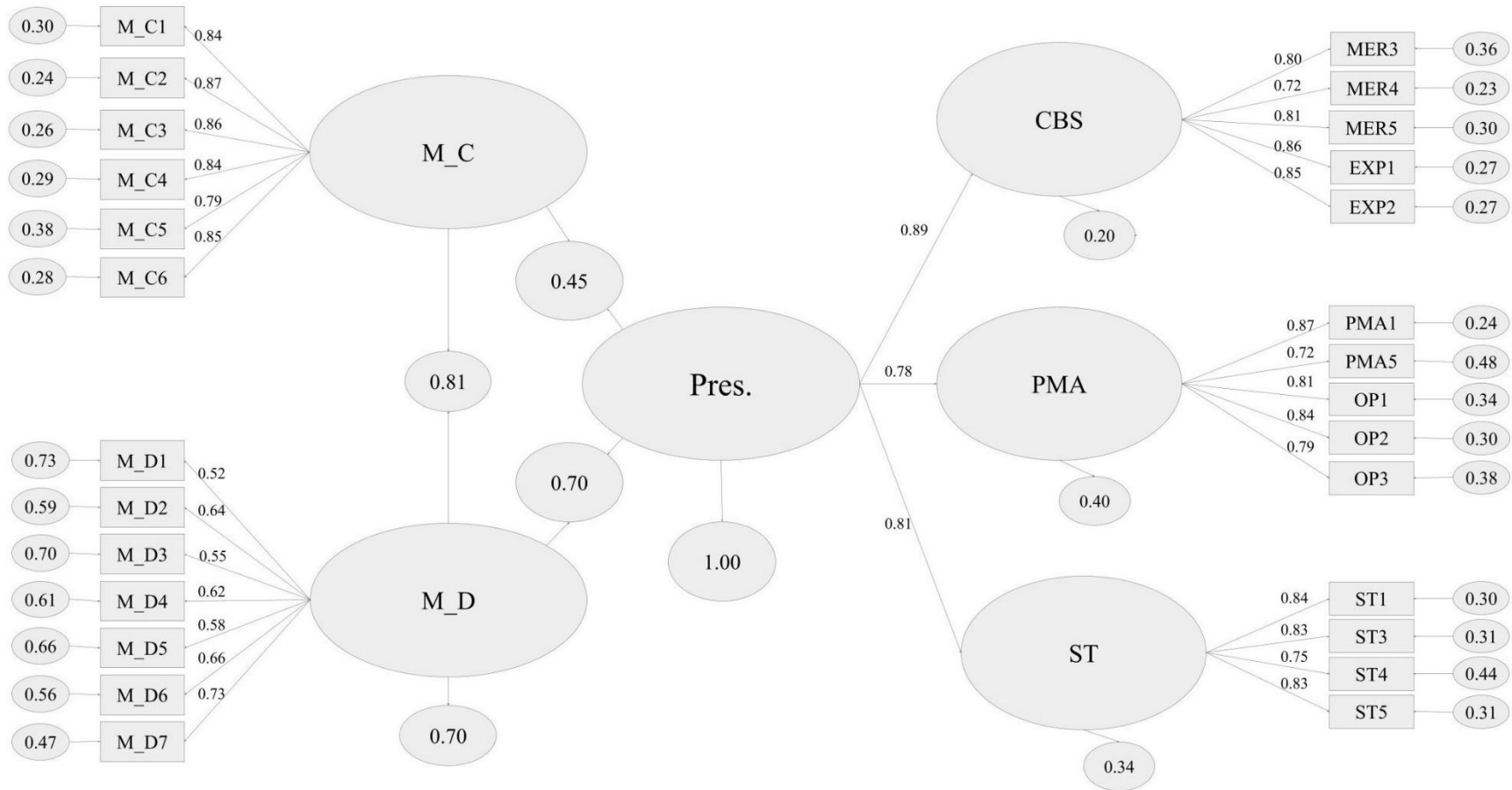
Structural Equation Model Results Examining Latent Correlations Between Presence and Related Constructs

Construct	Latent Correlation(s) with Presence	CFI	RMSEA	SRMR
Mindfulness				
Curiosity	0.455	0.912	0.094	0.085
Decentering	0.697			
Flow	0.701	0.838	0.083	0.099
Ego-Dissolution	0.663	0.929	0.116	0.082
Nondual Awareness	0.903	0.956	0.098	0.058
Rumination	-0.155	0.954	0.045	0.072
Self-Reflection and Insight				
Self-Reflection	0.237	0.901	0.096	0.092
Insight	0.226			

Note. $N = 601$.

Figure 24

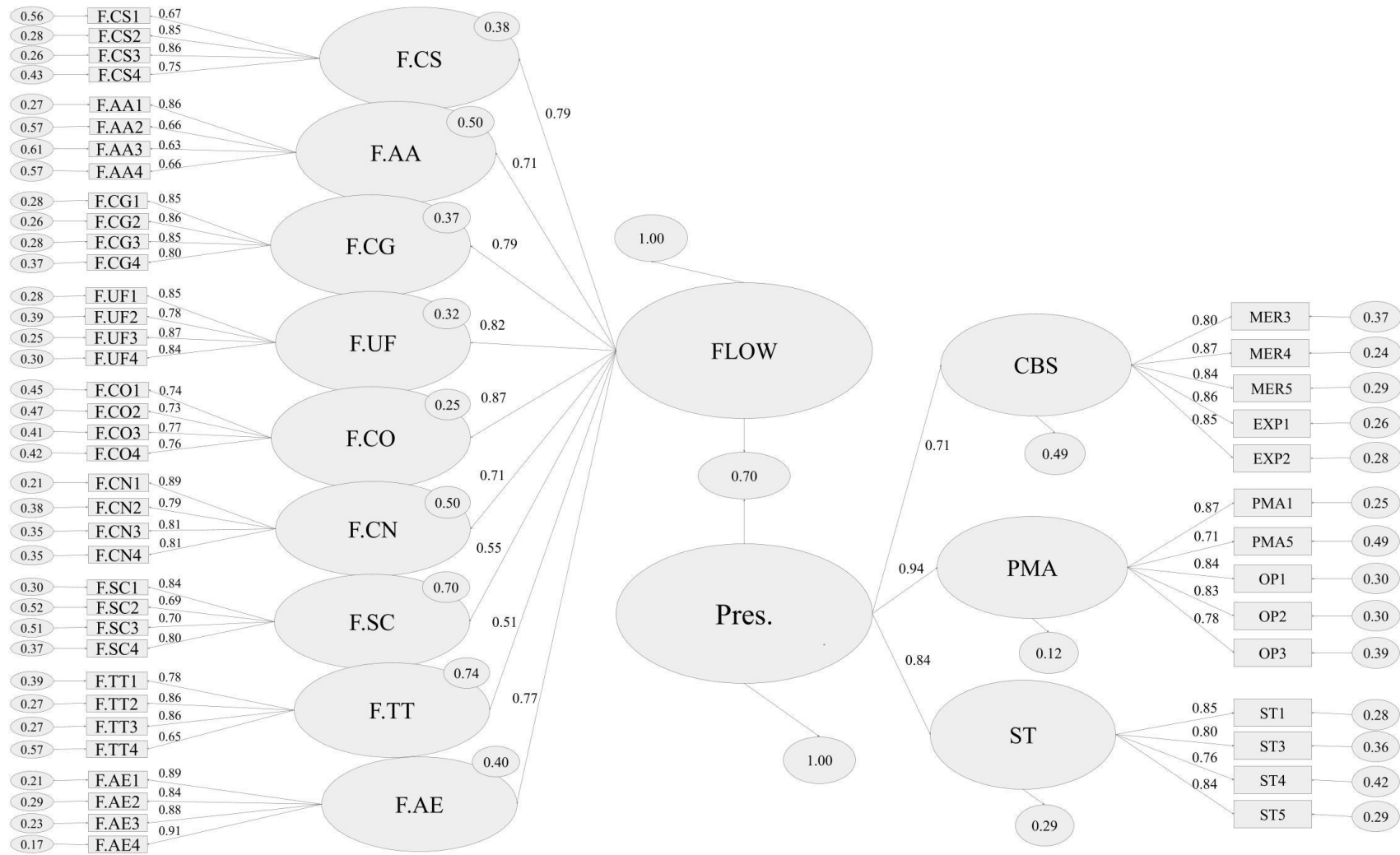
SEM Path Diagram of the Presence Scale and the Toronto Mindfulness Scale



Note. M_C = Curiosity factor, M_D = Decentering factor, Pres. = Presence, ST = Stillness of Mind factor, PMA = Present Moment Awareness factor, CBS = Consciousness Beyond Self factor.

Figure 25

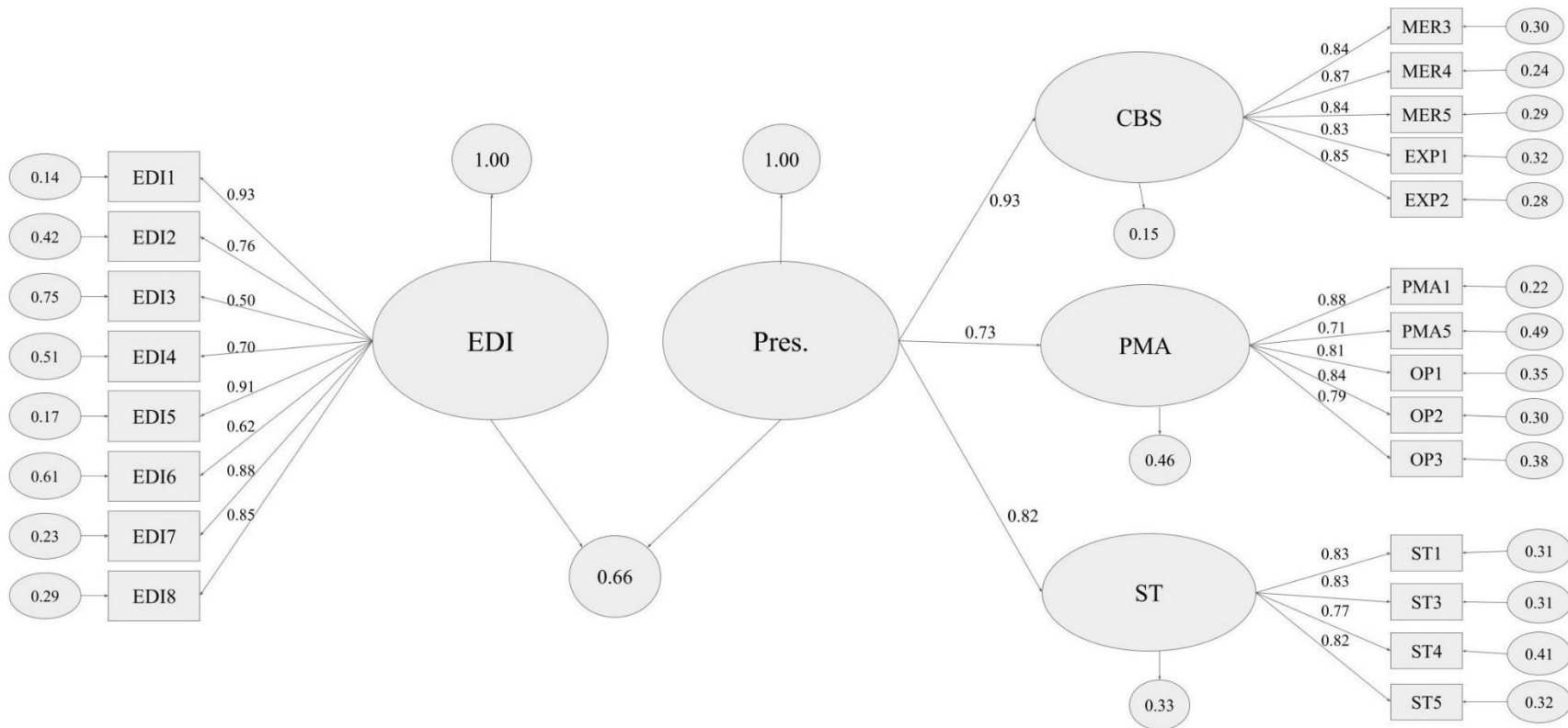
SEM Path Diagram of the Presence Scale and the Flow State Scale



Note. The flow factor labels are as follows: F.CS = Challenge-Skill Balance, F.AA = Action-Awareness Merging, F.CG = Clear Goals, F.UF = Unambiguous Feedback, F.CO = Concentration on Task at Hand, F. CN = Paradox of Control, F.SC = Loss of Self-Consciousness, F.TT = Transformation of Time, F.AE = Autotelic Experience. Pres. = Presence, ST = Stillness of Mind, PMA = Present Moment Awareness, CBS = Consciousness Beyond Self.

Figure 26

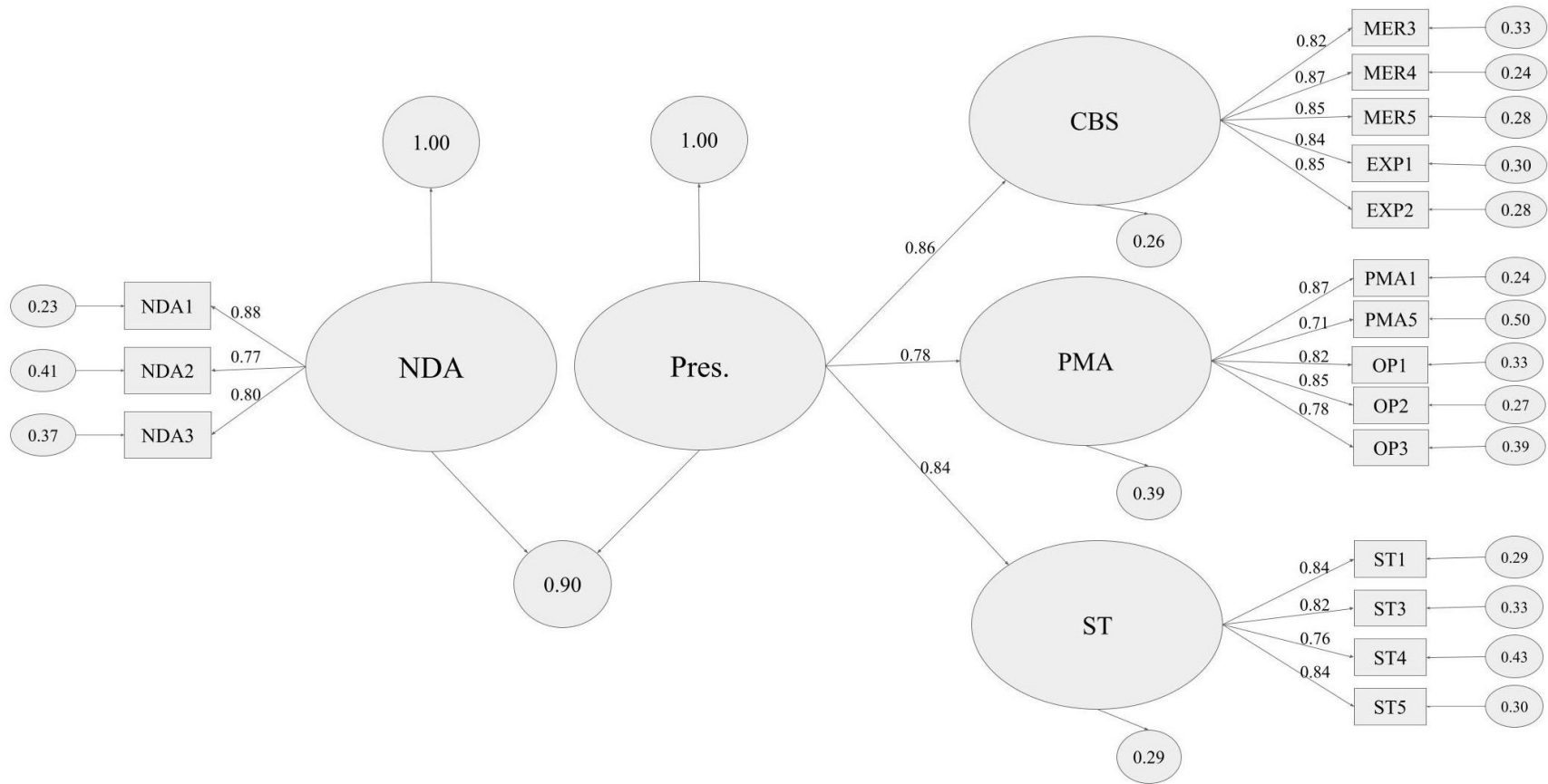
SEM Path Diagram of the Presence Scale and the Ego-Dissolution Inventory



Note. EDI = Ego-dissolution inventory, Pres. = Presence, ST = Stillness of Mind, PMA = Present Moment Awareness, CBS = Consciousness Beyond Self.

Figure 27

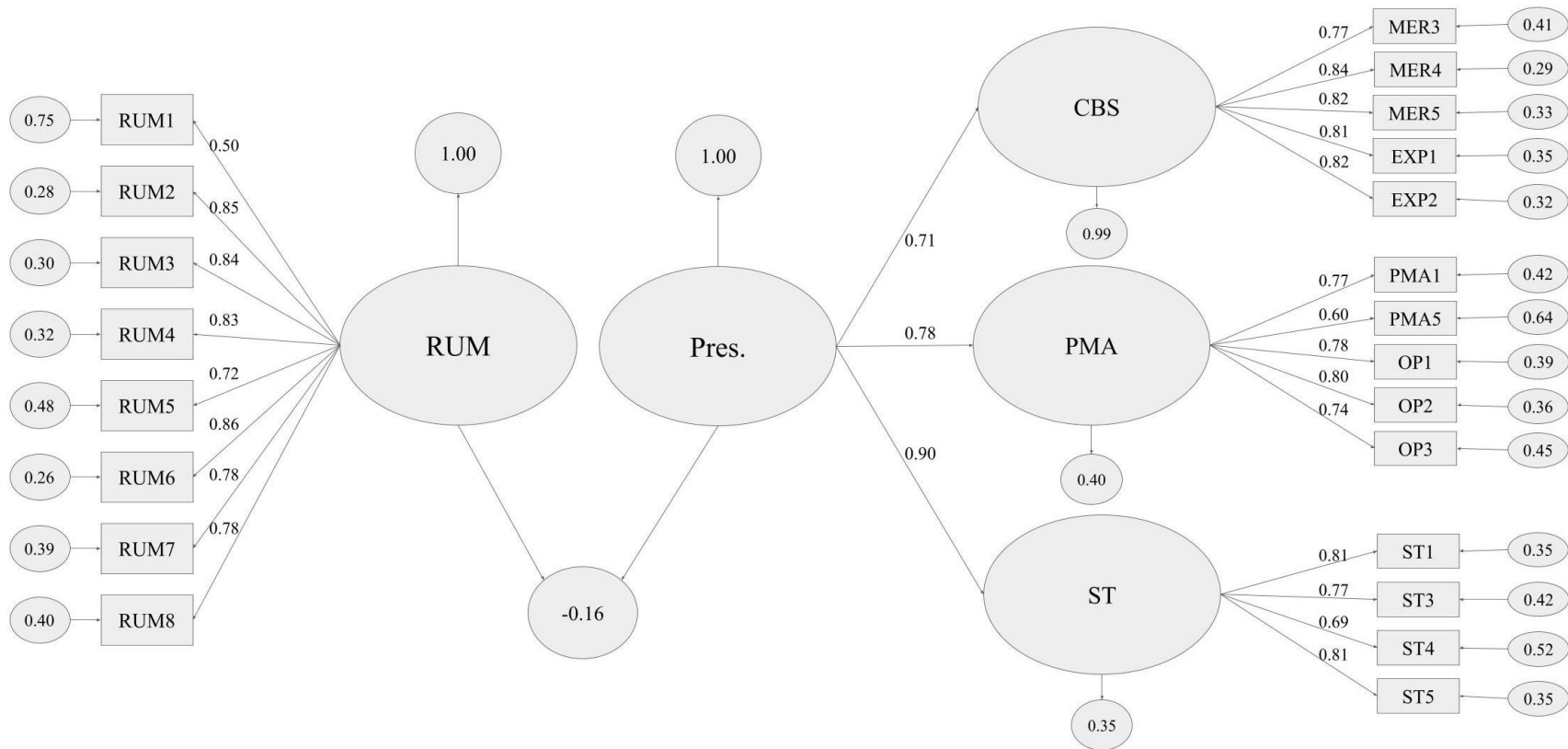
SEM Path Diagram of the Presence Scale and the Nondual Awareness Dimensional Assessment - State



Note. NDA = Nondual Awareness. Pres. = Presence, ST = Stillness of Mind, PMA = Present Moment Awareness, CBS = Consciousness Beyond Self.

Figure 28

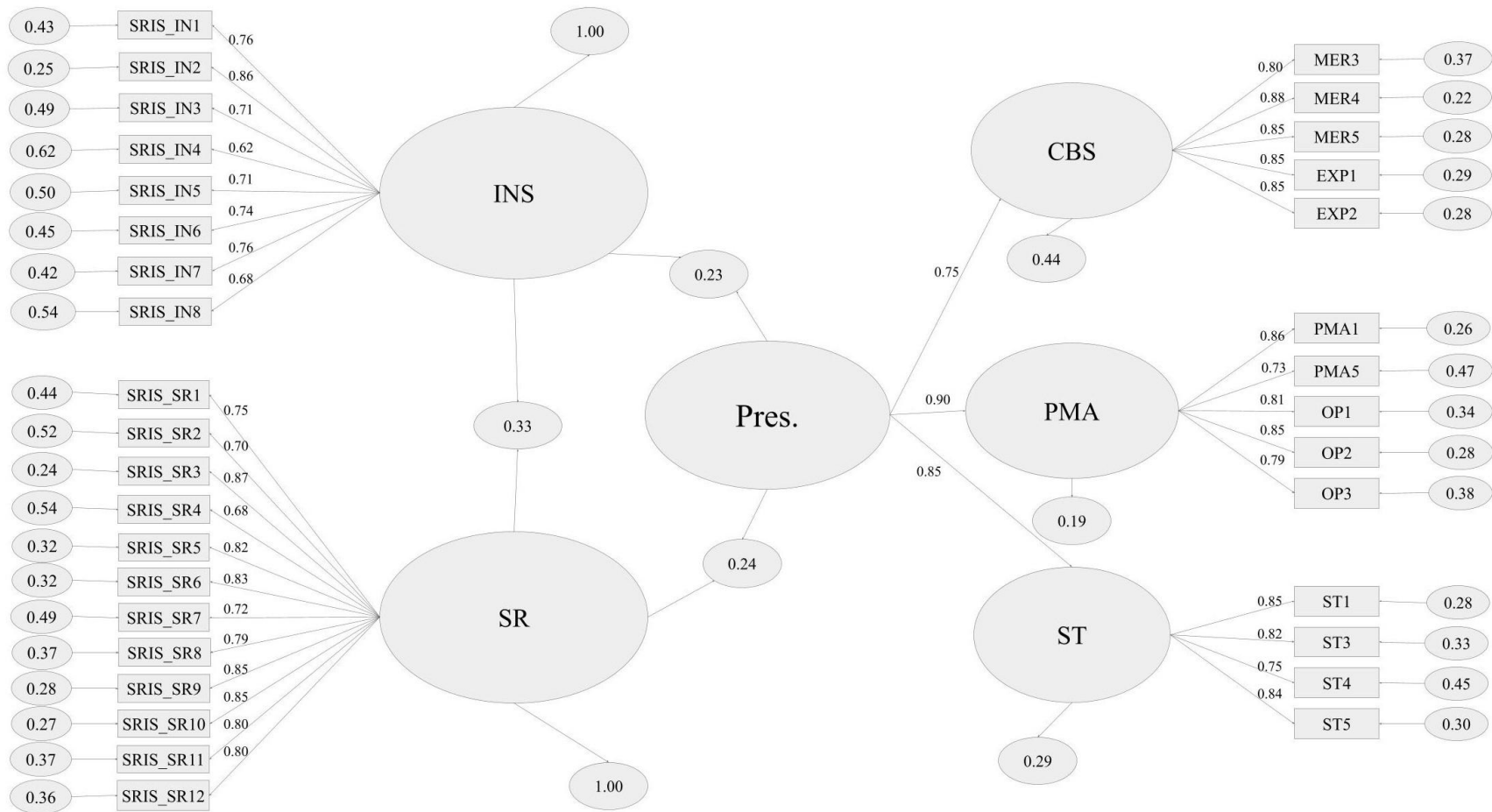
SEM Path Diagram of the Presence Scale and the Brief State Rumination Inventory



Note. RUM = Rumination, Pres. = Presence, ST = Stillness of Mind, PMA = Present Moment Awareness, CBS = Consciousness Beyond Self.

Figure 29

SEM Path Diagram of the Presence Scale and the Self-Reflection and Insight Scale



Note. INS = Insight, SR = Self-Reflection. Pres. = Presence, ST = Stillness of Mind, PMA = Present Moment Awareness, CBS = Consciousness Beyond Self.

As hypothesized, Presence has a modest negative association with rumination, given the latent correlation of -0.155. These results of discriminant validity can be trusted as this model of Presence and rumination fits the Hu and Bentler (1999) criteria.

The rest of the models with Presence and other constructs did not fit the Hu and Bentler (1999) criteria. If all these models did fit, it would be problematic to obtain these high correlations between Presence and mindfulness, flow, ego-dissolution, and nondual awareness. However, since the CFAs did not fit the other scale data, and the data did not fit these subsequent structural equation models, there is not evidence to suggest that these other scales measure what they were intending to measure. In other words, Presence is positively correlated with something in each of these scales; however, it is unknown what that something is.

Additionally, nondual awareness had the highest latent correlation with Presence; however, once again this cannot be trusted as there is poor data-model fit. A three-item scale does not have as strong psychometric properties as a longer, more robust scale. Additionally, the initial validity evidence for this three-item shortened version is limited to an experiment of its sensitivity to inducing nondual awareness through a body scan meditation (compared to an active control) in a relatively small sample ($N = 58$; Hanley et al., 2018). Thus, although a high correlation was obtained, Presence is highly correlated with something that may not likely be nondual awareness. It may be the case that this measure of nondual awareness is contaminated with a very specific type of construct irrelevant variance: Presence. Given the strong psychometric properties of Presence, it may be the case that the Presence Scale may be making this state Nondual Awareness Dimensional Assessment redundant, not the other way around.

The latent correlations between Presence and self-reflection and insight were modest positive values. Once again, however, the CFA results for the Self-Reflection and Insight Scale

revealed poor psychometric properties in this sample, and the subsequent structural equation models did not adequately fit the data. It appears that self-reflection and insight may not pose as barriers to entering Presence or endorsing the Presence Scale. However, future research is needed to more fully ascertain the relationship between these constructs. Additionally, other measures of self-reflection and insight could be considered.

Conclusion

How would you describe a life-affirming experience where you were fully present in the moment, your mind felt clear and aware, and you experienced a deep sense of connection or expansion—perhaps even a feeling of oneness with something beyond yourself? Our research team calls this Presence. This Technical Report explains how the construct of Presence was developed and the multi-year process through which we created the 14-item Presence Scale. We believe our transparency about these steps will be useful to readers, and that readers will agree with our conclusion that the Presence Scale was rigorously developed through best practices, underwent a thorough validation process, and is psychometrically strong. The model of Presence as a hierarchical construct with three lower order factors replicated in three samples, and in Study 3 our hypothesized model fit the data better than competing alternative models. Additionally, our results from Study 3 provided preliminary evidence that a) Presence is conceptually related to, but distinct from flow, mindfulness, nondual awareness and ego-dissolution, b) Presence is modestly negatively associated with rumination and c) self-reflect and insight are not pre-requisites to experiencing Presence nor to being able to complete the Presence Scale. We hope that the Presence Scale will set into motion many avenues of fruitful research across psychology.

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Appendices

Appendix A

Presence Literary Passages

Quotation 1

“I am looking out of my window in an anxious and resentful state of mind, oblivious to my surroundings, brooding perhaps on some damage done to my prestige. Then suddenly I observe a hovering kestrel. In a moment everything is altered. The brooding self with its hurt vanity has disappeared. There is nothing now but kestrel. And when I return to thinking of the other matter it seems less important.” (Murdoch, 2013, p. 82)

Quotation 2

“For nearly an hour I walked along the road to the 'Cat and Fiddle,' and then returned. On the way back, suddenly, without warning, I felt that I was in Heaven—an inward state of peace and joy and assurance indescribably intense, accompanied with a sense of being bathed in a warm glow of light, as though the external condition had brought about the internal effect—a feeling of having passed beyond the body, though the scene around me stood out more clearly and as if nearer to me than before, by reason of the illumination in the midst of which I seemed to be placed. This deep emotion lasted, though with decreasing strength, until I reached home, and for some time after, only gradually passing away.” (James, 1902, pp. 321–322)

Quotation 3

“My mind shattered. No words, no names, no thought remained - no mind, in fact, at all. What happened in that astounding moment? Past thoughts had died away, the future had not yet arisen; the stream of my thoughts was cut right through. In that pure shock a gap opened, and in that gap was laid bare a sheer, immediate awareness of the present, one that was free of

any clinging. It was simple, naked, and fundamental. And yet that naked simplicity was also radiant with the warmth of an immense compassion.” (Rinpoche, 2002, p. 43)

Quotation 4

“I felt [the elk’s] presence and somehow knew that they felt mine. As I stood there, the sense of time remarkably changed. What seemed like minutes I found later could have been over an hour. An intense feeling of clarity of the scene swept over me. All of my senses seemed to sharpen to an exquisite razor’s edge. I heard the tiniest sounds of distant streams and the rustling leaves as if magnified in a celestial amplifier. Everything seemed close to me and I felt, amazingly, a sort of merger of myself with everything, a sense of belongingness. I was connected with everything in that panorama, the grass, trees, rocks, insects, birds, the elk that I knew were quietly moving uphill, out of my sights. I felt a great rush of emotion, joy at being alive, the chance to exist along with something else. I will never forget that day.” (von Essen, 2010, pp. 35–36)

Quotation 5

“Come forth, and bring with you a heart
That watches and receives.”

(Wordsworth, 1798/2005, p. 183, lines 31-32)

Quotation 6

“But for the time being, around my place at least, the air is untroubled, and I become aware for the first time today of the immense silence in which I am lost. Not a silence so much as a great still-ness - for there are a few sounds: a creak of some bird in a juniper tree, an eddy of wind which passes and fades like a sigh, the ticking of the watch on my wrist - slight noises which break the sensation of absolute silence but at the same time exaggerate my sense of the

surrounding, overwhelming peace. A suspension of time, a continuous present.” (Abbey, 1968, p. 12)

Quotation 7

“The desire to live life to its fullest, to acquire more knowledge, to abandon the economic treadmill, are all typical reactions to these experiences in altered states of consciousness. The previous fear of death is typically quelled. If the individual generally remains thereafter in the existential state of awareness, the deep internal feeling of eternity is quite profound and unshakable.” (Edgar Mitchell, 2008, p. 215)

Quotation 8

“Once the lotus of your inner divinity gets full-blown and you reach the mental state where all the religious giants of human history experienced the all-encompassing sense of godliness, the exuberance of the human mind turns infinite. Awakening into that state makes all the perceptual limitations disappear, just like a bucket of muddy water turns crystal-clear once poured into the ocean.” (Naskar, 2016, p. 42)

Quotation 9

“If you are in a state of intense presence you are free of thought, yet highly alert. If your conscious attention sinks below a certain level, thought rushes in, the mental noise returns, stillness is lost, you’re back in time.” (Tolle, 2004, p. 94)

Quotation 10

“‘What I’m doing now,’ he continued, his eyes still closed, ‘is detaching myself from the experience.’

Detaching yourself?

‘Yes. Detaching myself. And this is important -- not just for someone like me, who is dying, but for someone like you, who is perfectly healthy. Learn to detach.’

He opened his eyes. He exhaled. ‘You know what the Buddhists say? Don’t cling to things, because everything is impermanent.’

But wait, I said. Aren’t you always talking about experiencing life? All the good emotions, all the bad ones?

‘Yes.’

Well how can you do that if you’re detached?

‘Ah. You’re thinking, Mitch. But detachment doesn’t mean you don’t let the experience penetrate you. On the contrary, you let it penetrate you fully. That’s how you are able to leave it.’

I’m lost.” (Albom, 1997, p. 103)

Appendix B

All Items Developed from Review of Literary Accounts of Presence and Their Thematic

Groupings

Factors, Themes, and Subthemes	Items in subtheme
Present Moment Awareness	
Dissolving sense of time	
Time stopped	488. My perception of time faded away 173. My perception of time vanished 477 & 508. My sense of time disappeared 238. It felt like time was suspended 559. It felt like time froze
Feeling a sense of “timelessness”	558. I experienced a sense of timelessness 280. I felt like my experience was removed from time 398. The experience felt timeless 596. I feel eternal in this moment, existing beyond bodily age and health 459. I transcended time and space
Feeling that the passing of time changed	141. Time moved differently during my experience 181. I felt a change in the rhythm of time 463. My perception of time was distorted 565. My sense of time changed 182. The beat of time changed in that moment
Unaware of time passing	143. I was unaware of how much time had passed
Other time-related items	590. There were moments when I slowed down and savored the moment (Savoring) 319. The experience came on immediately 318. The experience came on without warning 337. The experience came and went quickly (suddenly?)
Presence moment	
Awareness and attention in the present moment	
Awareness merging with the present moment	553. I was fully aware of the present moment 282. I felt my awareness merge with the present/immediate moment 283. There were moments where I felt a sense of oneness with the present moment (Oneness/unity) 622. I feel a sublime sense of being deeply interfused with my surroundings in this moment

	586. My mind at times became unfocused, yet aware of everything
	104. I felt glued to the present moment*
	284. I felt one with the present moment
	427. It felt like all of my senses were aligned with the present moment (Senses engaged)
Attention toward the present	16. I felt attentive to the present moment*
	19. There were many moments when my attention slipped away from the present moment [reverse code]*
	412. My attention drifted away from the present moment [reverse]
	47. My mind was present to the immediate moment*
	428. I felt as though the present moment was illuminated in my consciousness
Mind in the present moment	
Mind	46. My mind was present to the here-and-now*
	366. Although my mind was free from thought, I was aware of the immediate moment (No Mind)
	189. Even though my mind can go in many different directions, it felt centered in the present moment
No thoughts outside of the present moment	48 & 105. Nothing outside of my present experience crossed my mind*
	106. Nothing else seemed to matter outside of the present moment*
	107. It felt like nothing else mattered outside of my experience*
	49. I was preoccupied with matters outside of the present moment [reverse code]*
	304. I was not thinking about the past
	536. My mind was completely filled by my experience: other thoughts rarely entered
	300. I was not worried about the future
	584. My mind was closed to everything but that present time and place
Engagement and immersion in the present moment	
Immersion	20. I felt that I was experiencing the present moment fully*
	18. I felt immersed in the present moment*
	102. I felt like I was entirely immersed in the moment*

	373. I felt out-of-sync with the present moment [reverse code]
Effortless engagement	281. I felt like I was deeply engaged with the present/immediate moment 22. I easily embraced the present moment* 17. Without having to try, my attention was fully in the present moment* 21. I felt closely connected to the present moment* 619. I feel this moment is effortlessly stimulating 435. I felt entranced in the present moment 517. I felt entranced by something I heard or saw, such that everything else disappeared 587. Most of the time, my mind was not focused on ordinary tasks 429. My awareness was like a spotlight on the present moment 99. I felt fully absorbed in the moment*
Peace and present moment	188. Being in the present moment gave me a sense of peace (Peace) 539. I felt at peace while feeling engaged in the current moment (Peace)
Awareness towards surroundings/external focus	
Heightened awareness	251. I felt a heightened sense of awareness toward my surroundings 552. I felt heightened awareness of what was around me//everything in my immediate environment 257. I had a broad yet detailed awareness of my surroundings 529. I was fascinated by my surroundings
More aware of surroundings than self	150. I was more aware with what I was looking at than aware of myself 151. I was more aware of the energy from around me than aware of myself
Miscellaneous awareness of surroundings	418. I felt immersed in the experience of my immediate surroundings 372. I felt influenced by external pressures [reverse code] 56. I noticed various sensations caused by my surroundings (e.g., heat, coolness, the wind on my face) (Senses engaged)* 570. I felt the presence of other nearby life (ex. animals)
Attention directed towards surroundings	
Effortless attention	1. I felt attentive to my surrounding*

	207. I was not distracted by things in my environment
	15. There were moments when I had to work hard/really try to stay attentive [reverse code]*
	588. I effortlessly felt attentive to my surroundings
	415. My thoughts were directed outward
	253. Features of the environment were the focal point of my attention (Senses: vision specific)
	568. There were times that I noticed tiny details (through vision, hearing etc) in my surroundings (Senses engaged)
	202. I didn't have to try to concentrate
Inviting attention	3. Without having to try, my attention was captured by my surroundings*
	2. I felt like my surroundings were inviting my attention*
	4. I felt effortlessly drawn to my surroundings*
	528. Even if I had been to this place before, my surroundings invited my attention
	5. My surroundings consumed my attention*
	144. Sometimes, I would pause when elements of my surroundings caught my attention (Still mind)
Keen sensory awareness	
Heightened sensation	
Intensity	115. My senses were heightened
	397. There were moments when my senses felt heightened
	92. The intensity of the experience fluctuated*
	567. All of my senses seemed to sharpen
	455. My senses felt stronger than ever
	118. The surroundings overwhelmed my senses*
Breadth, scope	53. My senses opened up*
	174. My senses felt all encompassing
	585. My surroundings pressed in on all the senses; small details grew in significance
Cohesion	294. It felt like I was actively engaging multiple senses
	298. I felt like I was experiencing the world through multiple senses
	425. I felt in tune with the sensations of my surroundings
Awakening	52. It felt like my senses awaked*
	51. It felt like my senses came alive (Activating, energizing)*
Novelty	126. My sensations (seeing, hearing) felt new

	426. I noticed sensations much more than I usually do
	162. Compared to this experience, the way I normally see and use my senses seems superficial
Senses engaged	
Senses paramount	291. My senses were at the forefront of my experience 606. Using my senses deepened my experience
	292. My senses dominated my experience
Multisensory engagement	295 & 297. I noticed that multiple senses were highly engaged 55. My surroundings engaged my senses (sights, sounds, smells, tastes, etc...) * 458. Sounds began to sound musical
	296. I felt like I was experiencing the world through multiple senses
Senses as guide	607. I discovered more of my surroundings through my senses 568. There were times that I noticed tiny details (through vision, hearing etc) in my surroundings (Attention directed towards surroundings) 56. I noticed various sensations caused by my surroundings (e.g., heat, coolness, the wind on my face) (Attention toward surroundings)* 396. My senses felt attuned to my situation
No subcategory	54. My senses were engaged*
Multidimensional	63. I was aware of sensations in my body* 243. I felt a sense of stillness even though my senses were engaged (Stillness despite stimulation) 427. It felt like all of my senses were aligned with the present moment (Presence moment)
Senses: Vision specific	
Homing in	208. My visual attention did not wander 440. I couldn't keep my eyes off of what was around me 253. Features of the environment were the focal point of my attention (Attention directed towards surroundings)
Breadth, scope	8. It felt like my field of vision expanded* 9. It felt as if looking at my surroundings actually broadened my field of vision* 10. Being attentive to my surroundings widened my visual perspective (Centered awareness)*
Active, open engagement	124. Seeing felt passive [reverse] 224. I perceived my surroundings with open eyes 225. I received my surroundings with an open heart

Sense of connection between the self and senses	447. I felt connected to my senses 299. I felt connected to the environment through my senses
Stillness of Mind	
No mind	278. There were moments when I was free of thought yet highly alert 277. There were moments when I was free of thought (Freeing) 33. There were many moments when my mind was blank* 365. There were moments where my mind felt completely empty//free of thought 34. There were many moments when all thoughts disappeared* 366. Although my mind was free from thought, I was aware of the immediate moment (Presence moment)
Still mind	
Stillness of mind-thoughts	32. There were many moments when my mind felt still* 31. There were many moments when my mind was quiet* 30. It felt like my mind was settled* 198. My mind wandered [reverse code] 395. I experienced found mental stillness between my thoughts 394. Even though thoughts were present, I managed to occasionally achieve mental stillness 96. Even though my mind wandered at times, I felt an inner background awareness of stillness* 242. All of my thoughts had an element of stillness 89. My inner self felt calm*
Facilitating pause	142. I was able to pause and just be 144. Sometimes, I would pause when elements of my surroundings caught my attention (Attention directed towards surroundings)
General stillness	90. There were moments when I felt a deep sense of stillness* 91. I felt a sense of stillness inside me* 239. Stillness seemed to pervade my experience 250. There was a great silence around me
Clear mind	
Relief from unwanted thoughts	375. I could not quiet my mental chatter [reverse code] 45. Without even trying, my mind felt relieved from unwanted thoughts*

Ease of mind	201. I was less aware of my problems 25. My mind felt at ease*
Freedom of mind	27. My mind felt tense [reverse code] (Freeing)* 376. There were moments when my mind felt wide open 164. My mind was set free (Freeing) 28. The experience freed my mind from tension (Restoration/healing)*
Mental clarity	556. An intense feeling of clarity swept over me 180. If my mind were a bucket of muddy water, being in my experience turned the water crystal-clear 24. My mind felt clear* 369. It felt like all that clouds my mind was stripped away
Emotional valence- letting go of worries	42. My worries melted away* 246. My prior concerns seemed to fade away 514. I let go of my worries 44. All my cares disappeared* 41. My troubles effortlessly faded away* 43. The experience melted away my worries*
Stillness despite stimulation	386. My mind felt still (calm, quiet?) despite external disturbances 249. I felt like I could not be disturbed 387. External disturbances passed through me without affecting my experience 372. I felt influenced by external pressures [reverse code] 388. External disturbances did not seem to bother me 243. I felt a sense of stillness even though my senses were engaged (Senses engaged) 323. Even though I felt stimulated by my environment, my mind was calm 325. Even though I felt stimulated by my environment, my mind was still (Activating, energizing) 324. Even though I felt stimulated by my environment, my mind was quiet
Stillness within surroundings and experience	241. I felt a sense of stillness in my surroundings 266. There were moments where my surroundings afforded stillness 240. I noticed an element of stillness in my experience
Miscellaneous related to stillness of mind	279. My mind was noisy [reverse code] 417. My focus felt centered.

384. Everything seemed simple
 535. There were moments when I felt astonished
 that my thoughts just stopped
 29. My mind was centered*

Non-Judgmental Mind

Non-judgmental towards
 surroundings and experience

272. I was attentive to my surroundings without
 feeling the need to analyze them
 270. Though I was attentive to my surroundings, I
 did not feel the need to analyze it
 392. Things around me seemed resisted
 interpretation
 391. I recognized but did not mentally react to
 things around me
 380. I was thinking about an end goal in what I was
 doing [reverse code]
 248. I was attentive to my surroundings without
 being judgmental
 271. Though I was attentive to my surroundings, I
 did not feel the need to judge it
 461. I did not feel the need to be discerning in my
 experience
 469. I did not feel the need to rationalize my
 experience in the moment
 276. I felt non-judgmental about the things I was
 experiencing
 551. I judged my experience as it was happening
 [reverse]
 275. I experienced external stimuli without reacting
 to them

Acceptance

Passive acceptance

419. I accepted all that what was happening at that
 moment
 602. I was accepting of reality
 550. I was less judgmental of others
 234. I felt a sensation of acceptance
 601. In this moment, I feel I can accept the world for
 what it is: raw but endurable
 290. I felt like there was nowhere else I needed to be
 23. I easily embraced the present moment/the reality
 of that moment/experience*
 420. I felt less resistant to the events as they
 unfolded around me
 422. I felt more open to what was occurring than I
 usually do in my everyday life
 371. I felt the need to control my experience
 [reverse code]

Active
 acceptance/embrace

No need for control

Non-judgmental towards oneself	<p>600. I feel as though I do not have to analyze or control my surroundings in this moment</p> <p>274. I let myself enjoy the experience without analyzing it</p> <p>617. In this moment I am seeing, hearing, and/or feeling neither against nor with my will</p> <p>548. I was less judgmental of myself</p>
Accepting of one's thoughts	<p>390. I recognized but did not dwell on my thoughts</p> <p>35. Thoughts came and left my mind easily, without interfering with my experience*</p> <p>423. Thoughts came and left my mind with ease</p> <p>389. My thoughts were unobtrusive to my experience</p> <p>37. I was more accepting of my thoughts than usual*</p> <p>549. I was less judgmental of my thoughts</p> <p>306. I felt like I was unable to let go of my prior concerns [reverse code]</p> <p>547. My judgements were different than normal</p>
No need to control thoughts	<p>38. I tried to control my thoughts [reverse code]*</p> <p>40. I worked to block thinking certain thoughts [reverse code]*</p> <p>39. I was actively controlling my thoughts [reverse code]*</p> <p>411. I found myself daydreaming from time to time</p> <p>393. Thoughts were present, but they did not demand attention/interpretation</p>

Clarity and Freedom of Thought and Action

Ease of thinking	<p>36. My thoughts flowed with ease*</p> <p>430. My thoughts flowed like gentle music</p> <p>410. Thoughts flowed naturally without having to think about it</p> <p>186. Thoughts came and left like clouds on a windy day</p> <p>424. Thoughts flowed past my mind like a river</p> <p>431. My experience changed the flow of my thoughts</p> <p>370. My thinking was highly discursive [reverse code]</p> <p>555. At times I felt focused while also feeling relaxed</p>
Flow of thoughts	
Recurring thoughts subdue	<p>367. Cyclical patterns of thinking stopped</p> <p>374. I felt trapped in cyclical patterns of thinking [reverse code]</p>

Opening of thoughts	335. My awareness transcended dualistic thinking 132. My thoughts felt confined [reversed]
Intuition/control over thoughts	408. I made seemingly correct decisions without thinking about it 407. The correct decisions/actions seemed to reveal themselves naturally
Merging of action and awareness	149. I was more aware with what I was doing than aware of myself 204. I felt like my movement followed an effortless rhythm 409. Actions flowed naturally without having to think about it 405. My actions felt automatic 199. I was totally involved in what I was doing 203. I saw myself as separate from what I was doing [reverse code] 85. I was less focused on myself than usual (Focus/thoughts shifted away from self)*

Diminished/Dissolving Self-Concept/Sense of Self/Ego

Diminished self-concept	
Identity/sense of self becomes less visible or important	340. My sense of self dissolved 76. I felt like my identity dissolved away* 610. My sense of self has faded into this moment, but it is not diminished 492. My sense of self disappeared
Focus/thoughts shifted away from self	341. There was no feeling of “I” or “me” 344. I was not thinking about myself 154. Most of the time, I was thinking about myself [reverse] 416. Fewer thoughts were directed inward than usual 85. I was less focused on myself than usual (New perspective)*
Others somewhat related to shift away from self	510. I felt like the experience brought me outside of myself 495. My perspective grew vaster than myself 219. Any emotions I felt were not emotions about myself, I simply felt emotions
Related to rumination	496. I recognized the relative triviality of things that usually worry me 512. Issues in my personal life seemed less important after the experience
Decreased self-consciousness	87. I was aware of what others might be thinking of me [reverse code]* 516. I was aware of my appearance [reverse code]

	84. I was not concerned with how I was presenting myself*
	515. Feeling of vanity disappeared
	86. I felt self-conscious [reverse code]*
Decreased needs awareness	77. I was unaware of my own needs*
	153. I forgot about my own needs
Out of body	346. I was not aware of my physical needs
	146. There were moments when I forgot about my body
	345. I was not aware of my bodily sensations
	190. The experience made me feel less aware of my humanness
	191. At times I felt a nonhuman sensation
Diminished sense of self while merging with something greater	467. I felt like my sense of self dissolved yet expanded to encompass everything (Merging)
	481. I felt powerless, yet at the same time a connection with something powerful (Sense of connection with self and something else/something greater)
	611. A piece of myself left me and merged with my environment, but that did not make me feel diminished (Miscellaneous merging)
	316. I felt like I was being controlled by something else

Authenticity of Self

True self/authentic to oneself	
Freedom to be authentic	136. I felt like I could truly be myself
	140. I felt at ease to be myself
Became true self	137. This place made me truly become myself
	135. I felt like I found myself during the experience
	177. It felt like a new part of me was awakened
	179. It felt like a new part of me awakened
	613. I feel I am learning about the world and myself so long as I continue to experience this moment
	218. I experienced my awareness to be my own deepest essence
Became best self	138. My experience brought out the best in me
	139. My experience brought out the good in me
Integrated self	100. I felt like all of me was involved in the moment*
	157. My attention and my thoughts were in tune with each other
	401. It felt like there was no separation between my body and my mind
	511. I felt like the experience brought me outside of my head

621. I feel as though I am more in my soul than in my body in this moment

Expansion of Consciousness

Awareness expanding	
Awareness/attention becomes unbounded	288. There were moments where my awareness felt unbounded 13. My awareness felt unbounded* 259. My field of awareness felt boundless 286. There were moments where my awareness felt unrestricted 267. Occasionally my awareness transcended my immediate surroundings 12. My attention felt unbounded* 178. My attention was limitless 355. My conscious awareness seemed to expand beyond the self
Awareness expands past normal boundaries	195. My normal range of awareness expanded 287. There were moments where my awareness expanded 507. My spatial awareness increased dramatically 11. My awareness expanded beyond what I would normally pay attention to*
Other awareness expanding	112. I felt a blow-to-the-gut awareness of the forces around me 114. The feeling I experienced felt on the boundaries of human experience
Miscellaneous relating to awareness expanding	356. My conscious awareness felt inclusive of things beyond the self 583. Things that first felt familiar felt strikingly new 466. My experience felt empty yet all-containing 357. I sometimes felt like I transcended the here-and-now 339. I felt unconscious [reverse code]
Full body/mind experience	400. The experience involved my body and my mind 404. My whole being was involved in the experience 101. It seemed like my whole being was involved in the moment* 544. All of me felt awake 579. The experience elevated my mind
Awareness of something greater	
Invisible force	531. I felt aware of an irresistible force 530. I felt an irresistible force 479. I felt in touch with forces that are hard to describe with words (Profound, ineffable experience)

	347. I was aware of things that could not be explained by reason yet seemed real
	269. I felt in the presence of a great mystery
Higher power	533. I was aware of powers greater than myself
	520. Even if I was aware of powers greater than my own, I felt grounded/unshakable
	599. Even if I was alone, I felt the in the presence of something greater than myself
	478. I was aware of greater forces in the universe
	113. I felt aware of the universe's power
	194. I felt aware of the universe that I am a part of
Grand	334. I was aware of a cosmic order
	193. I felt aware of what a big world it is
	123. I felt aware of an infinity of space
	289. I felt aware of things beyond my immediate environment
Spiritual aspect	489. My experience felt sacred
	121. At times, the experience has a spiritual aspect to it
	338. I entered a higher state of consciousness
Openness	
General	93. I felt a sense of openness in the background of my experience*
	521. I felt a deep internal feeling of openness
	525. I felt open, in a youth-like way (Intrigue, curiosity)
	95. Even though my mind at times was still thinking, I felt an inner background awareness of openness*
Absorption	68. I felt entirely immersed in/by my surroundings*
	148. My outward awareness turned into a feeling of absorption
	147. I felt a sense of absorption with what I was doing/looking at
	69. I felt entirely absorbed by my surroundings*
	6. My awareness was consumed by my surroundings*
	175. The experience was all encompassing
	230. I felt detached from my experience, although I was fully consumed by it
	229. My experience penetrated me fully
	111. It felt like a peak experience*

Merging of Consciousness

67. I felt like I became a part of my surroundings*
75. I felt like my body expanded greatly beyond the boundaries of my skin*added

	571. I felt, amazingly, a sort of merger of myself with everything
	467. I felt like my sense of self dissolved yet expanded to encompass everything (Diminished self-concept)
	261. I felt like I was in close contact with my environment (the natural world?)
	569. Even if things were far away, they felt close to me
	609. I feel as though some part of me has fused into this moment, blurring the boundary between myself and my surroundings
	611. A piece of myself left me and merged with my environment, but that did not make me feel diminished (Diminished self-concept)
	352. My self-concept opened up
	74. I felt my body merge with my surroundings*
Boundaries between the self and other disappearing	
Self, surroundings, and everything else	594. I cannot say where I end and where nature/my surroundings everything else begins in this moment
	73. The separation between myself and the world around me disappeared*
	472. The usual hard boundaries between myself and my surroundings softened
	70. There were moments I felt separate from my surroundings [reverse code]*
	354. The boundaries between myself and other things dissolved
	483. I felt that the boundaries between myself and my surroundings were meaningless (Oneness/unity)
	473. The everyday distinctions between objects/elements in my surroundings and my body felt less distinct/softened
	260. Mental and physical boundaries seemed to disappear
Miscellaneous relating to boundaries between the self and other else disappearing	
Self and others	212. Distinctions between myself and others didn't make sense
Infinity	490. My experience felt infinite
	122. The experience filled my mind with a feeling of infinity
Meaning	285. Labels and definitions seemed irrelevant

Between things	348. I noticed the connectedness between things 460. The boundaries between objects seemed to fade away 381. I felt free from attachments
Sense of connection with the self and surroundings	
Merging, communing	402. It felt like there was no separation between my body, my mind, and my environment 80. I had moments where my inner sense of self merged with my surroundings* 595. I feel as though I have melded into nature/my surroundings in this moment, feeling one with it and perhaps feeling what it does
Merging in a reciprocal sense	591. I feel as though the vitality of this moment is being given to me by my surroundings rather than absorbed from them (Energy transfer) 223. I felt as though I was in a reciprocal relationship with my surroundings 222. I felt a mutual respect between myself and my surroundings
General connection to surroundings	263. Interacting with my surroundings made me feel connected to them 264. Interacting with my surroundings made me feel connected to something greater/larger than myself (Sense of connection with the self and surroundings) 573. I was connected with everything around me 71. There were moments when I felt disconnected from my surroundings [reverse code]*
Made whole	62. Being in these surroundings made me feel whole (Energy transfer)*
Bonding	134. I felt a bond with nature/my surroundings 133. As the experience continued, I felt a bond form/grow with the surroundings/with the world 262. My environment provided a sense of company/community
Belonging	245 & 314. I felt a sense of belonging in my environment
Sense of connection with self and something else/something greater	66. I felt like I was a part of something beyond myself* 403. I felt a connection to the universe 480. I felt small, while at the same time I felt an expanding sense of connection 361. I connected with the fabric and structure of existence itself 506. I felt some sort of spiritual connection 446. I felt connected to my soul

	481. I felt powerless, yet at the same time a connection with something powerful (Diminishing self-concept)
	82. I felt a deep sense of connection in the background of my experience*
	83. I felt a deep sense of connection at the forefront of my experience (Oneness/unity)*
	572. I felt a sense of belongingness, even if I couldn't identify where the feeling was coming from
	497. I felt that I had experienced something greater than myself
Merging with energy/shared energy/ or shared space	
Feel energy moving through/ into you	592. I feel as though the tranquil energy of this moment is flowing through me (Energy transfer)
	582. I felt energy pour in and around me (Energy transfer)
	554. I felt a sense of energy sweeping through and around me (Energy transfer)
	61. I felt a sense of energy between myself and what was around me (Energy transfer)*
Connected to the energy around you	79. My inner self felt connected to the energy around me (Energy transfer)*
Feeling energy around you	172. I felt energy from what I was paying attention to (Energy transfer)
	171. I felt energy from what I was interacting with (Energy transfer)
	145. Even if my body was passive, I felt an active energy from something (Energy transfer)
Oneness/unity	
Overall sense of unity	176. I felt an all encompassing sense of oneness
	442. I felt a sense of oneness, that was almost healing
	83. I felt a deep sense of connection at the forefront of my experience (Sense of connection with self and something else/something greater)*
	313. I felt a sense of unity with other people or things (or with something greater)
	351. I felt unified with other people or things
Unity with environment/surroundings	283. There were moments where I felt a sense of oneness with the present moment (Present moment)
	72. I felt a sense of oneness/unity with my surroundings*
	561. I felt a sense of oneness with my environment
	168. I felt one with the landscape around me
	169. I felt one with what was above or around me

	353. My sense of self felt like it included other people or elements of my surroundings, or my activity
	483. I felt that the boundaries between myself and my surroundings were meaningless (Boundaries between the self and other disappearing)
Feeling of connection	349. Everything seemed connected
	310. Everything seemed like it was in harmony
Inner feelings of unity	81. I felt a sense of oneness in the background of my experience*
	315. I felt a sense of discord [reverse code]
	350. I sense an eternal unanimity
	167. I felt an inner sensation of bliss/oneness (Positive valence)
	165. I felt a freeing sense of oneness (Freeing)
	170. It felt like everything was me and I was everything
	216. I was one with my awareness
	97. Even if thoughts came to mind, I felt an inner background awareness of wholeness*
Synchrony with-something else/everything else	453. I felt as if I was in harmony with my surroundings/what was around me/everything
	493. I felt like I was in harmony/unity with all of existence/the universe
	406. I felt in perfect rhythm with what I was doing/the world around me
	452. I was in-sync with my environment
	293. I felt in-sync with the things around me
	312. I felt in-concert with all things

Activation of Energy

Energy transfer

Feeling energy around you	172. I felt energy from what I was paying attention to (Merging with energy/shared energy/ or shared space)
	171. I felt energy from what I was interacting with (Merging with energy/shared energy/ or shared space)
	145. Even if my body was passive, I felt an active energy from something (Merging with energy/shared energy/ or shared space)
Feel energy moving through/into you	592. I feel as though the tranquil energy of this moment is flowing through me (Merging with energy/shared energy/ or shared space)
	582. I felt energy pour in and around me (Merging with energy/shared energy/ or shared space)

	554. I felt a sense of energy sweeping through and around me (Merging with energy/shared energy/ or shared space)
	61. I felt a sense of energy between myself and what was around me (Merging with energy/shared energy/ or shared space)*
Connected to the energy around you	79. My inner self felt connected to the energy around me (Merging with energy/shared energy/ or shared space)*
Energized by surroundings	591. I feel as though the vitality of this moment is being given to me by my surroundings rather than absorbed from them (Sense of connection between self and surroundings)
Sense of wholeness	62. Being in these surroundings made me feel whole (Sense of connection with the self and surroundings)* 612. Even though some of my energy left me going to what was around me, I felt whole
Activating, energizing	
Exhilarating	445. The experience was exhilarating 537. Even if I felt fear, it was exhilarating
Feeling awake	546. Even if I was tired, being in the moment made me feel awake 543. All of my body felt awake
Feelings alive	200. My body feels alive 110. The experience made me feel so alive* 51. It felt like my senses came alive (Heightened sensation)* 575. I felt joy of being alive (Positive valence) 545. I felt lively sensations
Rush of emotion	574. There were times when I felt a great rush of emotion
Contradicting but not competing	265. I felt simultaneously exhilarated and calm 325. Even though I felt stimulated by my environment, my mind was still (Stillness despite stimulation)

Miscellaneous

Connection between mind/thoughts & experience/surroundings/senses	156. My awareness and my thoughts felt aligned 155. My attention and my thoughts felt aligned 432. My awakened senses calmed my thoughts 433. My experience calmed my thoughts 326. My environment made my mind feel calm 252. My thoughts mostly concerned my sensory experience 50. There were many moments when I was “in my head” [reverse code]*
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	247. There were moments where my thinking was overcome by my senses
	321. It felt like my surroundings caused my mental state
	185. My feelings came and left without interfering with my experience
	209. I felt like I could control my environment
	322. The external environment seemed to bring about my internal condition
	60. My surroundings grounded me*
	184. My breath anchored my experienced
	78. It was as if my surroundings tapped my inner self*
Freeing	
General freeing	128. The experience felt freeing 163. I felt set free 526. My spirit felt free
Free thought/ mind	541. My mind felt released from tension 27. My mind felt tense [reverse code] (Clear mind)* 413. I felt free from the demands usually placed on my attention 164. My mind was set free (Clear mind) 277. There were moments when I was free of thought (No Mind)
Release from confinement, experience of being set free	130. I felt confined [reversed] 131. My body felt confined [reversed] 127. Feelings of confinement disappeared 439. I felt as though weight was lifted off my shoulders 217. I felt like I was floating 7. My attention was narrowly focused on specific items in my surroundings [reverse code]
Freeing & oneness	166. My sense of oneness with something greater than myself made me feel free 165. I felt a freeing sense of oneness (Oneness/unity)
Miscellaneous relating to freeing	129. Interacting with the environment felt freeing 303. I let go of fear 382. I felt free from desire
Surroundings play an important role	
Setting paramount, credit given	256. My immediate environment played a large role in how I felt 320. It seemed like my external environment played a large role in my experience

	449. The environment heavily influenced my experience
	58. The surroundings I was in deeply influenced my experience*
	59. My interactions with the surroundings deeply influenced my experience*
	255. My experience felt highly dependent on my environment
	378. I felt like my surroundings afforded (caused, created, played a large role in, etc?) in my experience
	57. I would not have had the same experience in different surroundings*
	377. My experience began to take the shape of my environment? /was molded by my environment?
	143. My experience was highly dependent on my sensory perception
Nurturing	451. I felt supported by my surroundings
Peace	
Peace of mind and inner self	188. Being in the present moment gave me a sense of peace (Presence moment)
	244. I felt a sense of overwhelming peace
	235 & 187 & 484, 538. I felt at peace
	540. I felt a soft underlying feeling of tranquility
	26. My mind felt at peace*
	342. I felt restless [reverse code]
	88. My inner self felt at ease*
	485. I felt tranquil
	301. I felt anxious [reverse code]
Peace with surroundings and belonging	159. Even if I had been struggling, being in these surroundings gave me a sense of peace
	309. I felt like everything was in harmony
	593. Nature's peace flowed into me
	385. I felt bothered by the goings on around me [reverse code]
Peace with life, death, universe-being	237. If I had died after this experience, I would have felt okay
	539. I felt at peace while feeling engaged in the current moment (Presence moment)
	232. I felt at peace with the cycle of life
	233. I felt at peace with the order of the universe
	236. If I had died after this experience, I would have felt at peace
Positive valence	
Surroundings	434. Aspects of my surroundings entranced me

158. Even if I had been struggling, being in these surroundings gave me joy
437. Little aspects of my experience (hearing the call of a bird or listening to a stone pebble drop in the water) brought me joy
- Personal positive feelings
268. I felt content
486. I felt joyful
578. I felt a sense of wonder
206. I felt satisfied
562. I felt a sense of gratitude
505. Whether I was in a negative or positive situation, I felt a strong positive emotion (such as peace, tranquility, joy, serenity, or bliss)
305. I felt a happy relaxation
563. I felt a mix of enjoyment and a feeling of oneness
119. Even if I felt fear, I enjoyed the feeling
379. I felt like I was struggling [reverse code]
383. I felt perfectly content in what I was doing
487. I felt blissful
616. I feel I am doing what I should be; I do not need to be doing more
500. I felt more important in the world
- Savoring
327. I was passively enjoying my experience
576. I savored the way I felt during the experience
590. There were moments when I slowed down and savored the moment (Dissolving sense of time)
205. As the experience was ending, I was reluctant to conclude my experience
577. I savored the experience
- Profound, ineffable experience
Experience doesn't seem real
196. What I felt was outside of my normal day to day experience of reality
308. I felt like I was in an altered state of consciousness
436. There were moments when I felt like my experience was an imagination
468. My experience defied logic
604. I feel as though I am experiencing some part of life for the first time in this moment
359. Much of the world around me seemed like an illusion
183. I felt like I experienced a different sense of reality
527. Even if I had been to this place before, the experience felt new

	213. My experience felt beyond the boundaries of right and wrong
	227. I felt in-between reality and an experience outside of reality
Experience feels abnormally real	499. The experience felt more "real" than other experiences
	307. The experience differed from my normal state of mind but still felt real
Experience is difficult to describe	364. My experience resists description
	464. Many aspects of my experience are ineffable
	476. It would be hard for me to fully describe how I felt with words
	498. I had no words that could fully describe my experience
	215. I would have a difficult time putting my experience into words
	603. I feel as though I am discovering new things which I do not have the words for in this moment
	479. I felt in touch with forces that are hard to describe with words (Awareness of something greater)
	363. Words cannot explain my experience
	491. I would have a hard time putting the experience into words
	117. The experience was moving, but it would be hard to fully account why through words
	273. I did not seek analogy for what I was experiencing
	465. Words cannot do justice to my experience
New perspective/novel experience	482. I experienced a shift in my perspective // my perspective shifted during the experience
	414. I felt like I could see old problems in a new light
	329. I saw things (the universe, reality?) in a new way
	509. I felt like the experience gave me a fresh perspective (could add on my life, on the world)
Deep discovery/truth	220. I felt that I knew a deep truth in my experience
	331. I was made aware of new things
	332. There were moments of epiphany
	360. I felt like I could see the underlying truth of existence
	343. The experience revealed new truths to me
	330. I gained new insights into the nature of reality
	358. I felt like I gained some valuable insight and knowledge into the nature of reality

494. I felt as though my experience were a manifestation of the ultimate truths of the universe
618. I feel passive wisdom in this moment
615. I feel I have come to something without knowing why
503. I felt that I gained new insight I could not achieve before the experience
471. I felt like I gained insights into the nature of the universe
333. I felt like truth was revealed to me
- Something deeper in the moment
560. I felt something deep behind my emotions and thoughts
580. The experience touched unknown reaches of my mind
581. I experienced a deeper sense under my feelings that I usually don't experience
94. I felt a sense of _____ in the background of my experience*
98. I felt a background awareness of ___ during my experience (ex. Openness, calmness, stillness)*
- Moving/profound experience
120. The experience moved me personally
368. My experience felt simple yet profound
336. Although the experience was extremely powerful (significant, intense?), it only lasted a short time
504. The experience felt sacred
532. There was something powerful about this experience
556. This experience tapped a deep part of my psyche
108. The experience was all-consuming*
564. I will always remember this experience
462. My experience seemed sacred, though not necessarily in a religious way
474. There were moments of my experience that felt sacred
518. The experience felt profound
534. There were moments when I felt astonished
475. The experience felt special
557. I felt deeply moved by the experience
109. The experience was deeply awakening*
- Intrigue, curiosity
116. My curiosity was heightened
524. I felt a childlike curiosity
125. Seeing felt like a new/lively sensation
161. I felt a sense of wonder // I felt a sense of curiosity

	197. The were moments that dazzled me
	421. I was curious about what was happening around me
	457. My imagination was activated by my surrounding
	454. I felt as though my imagination ran wild
	525. I felt open, in a youth-like way (Openness)
	589. I was amazed at how common features subliminally attracted and held my attention
	605. I felt a childlike sense of wonder
	443. I felt youthful in my experience, like a childlike wonder
Restoration/healing	444. The experience was healing
	456 & 597. The experience felt healing
	214. It felt like my soul got to lie down for a moment
	211. My soul felt at rest
	302. I let go of all tension
	438. Little aspects of my experience (hearing the call of a bird or___) eased any lingering pain
	450. I felt healed by the environment
	598. The experience felt like a remedy
	28. The experience freed my mind from tension (Freedom of mind)*
	542. Tension left my mind, but I still felt alert
	441. The experience restored me
	513. I felt better after the experience
	14. There were moments when the experience was draining on my attention [reverse code]*
Involves body... (and no other place for the items)	448. I felt light
	65. My body was receptive to ___*
	221. There were moments that were physically challenging
	103. Even though I could still move my body, I felt incapacitated during the experience*
	620. I feel in my body that it is fully open to watching and receiving in this moment
	64. I felt closely connected with my body*
	160. I felt a sense of delight running though my body
Lingering	226. I wanted to linger in the experience
	317. The experience seemed to stay with me even after it ended
	231. I clung to my experience [reverse code]
Paradoxical elements	502. I felt everything and nothing at the same time

	362. My experience defied logic/rationality but still felt real
	258. It felt like I was paying attention to everything and nothing at the same time
	470. I was okay with (did not try to solve?) the paradoxical elements of my experience
Positive feelings for surroundings	192. I felt a love for my surroundings
	608. I feel a tenderness for nature/my surroundings in this moment
Everything in right place	399. Everything seemed like it was in the right place
	311. I felt like nothing was out of place
Uncodeable, items cannot be categorized	328. The experience arose spontaneously (without warning?)
	522. I felt a deep internal feeling of ___ (like this wording)
	523. Even if it wasn't logical in the moment, at times I felt invisible
	519. I felt unshakable
	210. I didn't consider myself to be doing anything in particular
	614. I feel almost as if I am thinking by feeling
	501. I felt incredibly humbled
	152. At times, I felt vulnerable
	228. I was reluctant to conclude my experience

Note. The “*” located to the right of the first 111 items indicate that these items were created before the Presence Passage literature review process. Items without the “*” were created during the literature review process. There are also a handful duplicate items throughout Appendix B ($n = 6$). The duplicates signify that two or more people from the research team produced the exact same item independently. In order to maintain the separation of the items, we assigned them independent identification numbers. Grammatical errors, parenthesis, comments, and partial items (e.g., “522. I felt a deep internal feeling of ___”) were left untouched for items throughout the appendix creation process. We decided to leave these errors in order to contain the value of the true item creation process. This reflects an authentic process and hopefully will provide insight into the item generation process.

Appendix C

Selected Participant Accounts of Presence Experiences

We asked participants to “think back to an experience you’ve had, fairly recently, that resonates with any or all of the statements in the bulleted list below.

- Your experience may have been brief or may have lasted a longer period of time.
- During your experience, your body may or may not have been active.
- You felt receptive and alive to the here-and-now.
- You weren’t thinking about the past or worrying about the future.
- Your mind felt peaceful even while highly aware of what was going on.
- You experienced a sense of freedom.
- A part of your mind was aware of you in the experience, and not judging any of it.
- You felt a connection to – or even part of – a larger existence.”

Participants then wrote brief responses to three questions (Q1 – Q3) about their selected experience. In this appendix, Q1 is answered in the first paragraph, Q2 in the second paragraph, and Q3 in the third paragraph. Below is an example of how the passages are formatted in this Appendix:

Title Characterizing the Participant’s Presence Experience

Mean Presence score

Study this response came from

Participant’s age and gender

Response to Q1: In 3-5 sentences, please describe what led up to your experience.

Response to Q2: In 3-5 sentences, please describe what happened during your experience. For instance, what were you doing? Where were you?

Response to Q3: In 3-5 sentences, please describe how you were feeling during your experience. For instance, think about what emotions, sensations, or thoughts, if any, came up during your experience.

The fifteen examples shared below represent experiences in which participants reported experiencing a high degree of Presence, ranked by mean Presence score. A mean score of 7 is the highest possible score, meaning the participant reported experiencing each Presence Scale item “completely.” These examples were selected from among the highest-scoring experiences to illustrate the range and depth shared by participants. We crafted titles to describe each of these experiences and ordered these by mean Presence score. We have left grammatical and spelling errors unchanged to preserve participants’ own language.

1. Synched with the Sky: Experiencing Euphoric Oneness with the Planet During Free

Fall

Mean Presence score: 7.00

Study 3: U.S National CFA sample

57-year-old male

“A good friend of mine and i had been discussing trying something we never did before but always wanted to do,so we picked a day and went top do it on an early saturday morning.

We went skydiving for the first time, it was frightening but once i had exited the plane it was pure heaven,completely silent although i was falling at hundreds of feet per minute, everything was white and i was in the most perfect place i have ever been, no drug i ever took compared to thjs high i experienced doing this.

I felt like i was one with the planet, the sky the clouds, like i said earlier once i exited the plane and the plane was out of sight and sound my whole experience free falling was completely silent, my mind was clear, my thoughts were 100% bliss, where as 10 minutes earlier while climbing altitude to jump i was petrified and literally scared out of my mind, but once i had nothing holding me to the earth everything became euphoric.”

2. From Hectic to Bliss: Finding Peace at a Book Store

Mean Presence score: 7.00

Study 2: U.S. National EFA sample

38-year-old female

“I worked longer in the day than I should have. This caused me to be late for a few errands I had to run. In turn I was very irritated that my weekend started off so hectic.

I went to a book store since books give me a natural high. I walked the aisles looking at and feeling the books. This immediately calms me down because of the nostalgia I feel around books.

I was feeling calm, peace, and just light. All my irritation was gone and replaced by a feeling of pure bliss. I felt free and completely at home and like nothing else would bother me the rest of the day because I had my books.”

3. Oceanic Euphoria: When Ocean Washes Away Your Anxiety

Mean Presence score: 6.93

Study 3: U.S. National CFA sample

40-year-old female

“I was on vacation with my youngest son and my husband. We were all burned out with school and work and just needed to get away so we left with no planning--which is the best sort of vacation, honestly. We were driving up the PCH and we had gotten to Oregon, just north of Newport, and got out of the car at a state park.

My husband, son, and I were on a long road trip up the PCH and we had stopped at a state park in Oregon. We spent about 5 hours hiking up and down the beach. I must've collected 100 pretty shells and rocks.

I was feeling pure euphoria. I never feel more like myself and more at peace with the world than when I am at the ocean. The sound alone drowns out the world around you and the mist just washes every worry and anxiety you have away in that moment. It brings me to absolute tears just thinking about it.”

4. Experiencing Relief and Renewal Through the Beach, God, and Performance

Mean Presence score: 6.93

Study 3: U.S National CFA sample

48-year-old female

“Had been feeling down about a living situation. I sing with a group and we were asked to go to an event at a beach. I had been wanting to go to the beach all summer.

I went down to the beach with the singing group. It was a beautiful day and we all arrived to do a sound check. We waited for our turn to sing. While waiting I was able to walk the pier and take in the breeze. After we finished I got a chance to go down to the water and put my feet in the water.

I had such feeling of joy and peace. It had been so long since I had been to the beach and this year it was a longing in my soul just to get there. As I felt the breeze from the ocean blow against my face I was being refreshed. I felt the presence of the Almighty One which created me and this earth. There was a feeling of being connected to everything around me, the sand, the water and the wind. It felt like a big hug from God.”

**5. Closure on Orcas Island: Celebrating the Victory of Last Chapter Before
Embarking on a New Journey in College**

Mean Presence score: 6.73

Study 1: College EFA sample

18-year-old female

“My two good friends and I went on our first solo camping trip together for two days on Orcas Island. It was the summer after we graduated high school. We packed our bags very last minute, though we've been planning for 2 weeks. We got breakfast at a beautiful small town diner and took the ferry with my friend's car and drove to the campsite by the lake.

We were driving through Orcas island, from the ferry toward our campsite. The windows were down and we were playing vibey indie music and breathing the fresh air and admiring nature and funny names of the road signs. Our clothes were very comfortable and the weather was gorgeous.

I felt completely free and at peace with the wind, fresh smell, gorgeous views, uplifting romantic indie music, and the comforting presence of my two close friends from 2nd grade. I felt like this truly was the beginning of the next chapter of my life- college. I felt confident and content at where I was in life, and excited about my future. I also felt bittersweet about the ending of high school. It was good closure.”

6. Wrapped in Comfort by The Breeze

Mean Presence score: 6.57

Study 1: College EFA sample

20-year-old female

“I was incredibly stressed due to failing several classes and struggling with what I now know was depression. I had not gone outside in a few days, and my state of mind was rapidly worsening. I felt alone in my struggles and rather hopeless.

I had a walk around and found myself on a high overlook above a busy street. I stood leaning against the border of the overlook staring at the people and cars below, as the wind blew through my hair, for about two hours. No thoughts, just feeling the breeze and letting the moment sit. The wind was comforting, and for someone who does not like to bother anyone by talking about their troubles, the wind felt like a hug. It felt like reassurance.

I have never been especially connected to nature, but during this time I considered how old the wind is. That air has been circulating this planet for longer than we can even conceive, and it has been everywhere. The breeze comforting me in that moment has seen and been with those more and less fortunate than me, witnessed people in situations better and worse than mine. It understands, you know? I felt less alone that way, knowing at least the wind understood me and still stuck around.”

7. Finding Peace While Planting Tomatoes

Mean Presence score: 6.50

Study 2: U.S. National EFA sample

53-year-old female

“I started working my vegetable garden. I gathered all my tools in a bucket. I walked down to the garden. I sat down on the ground and got ready.

I set my tomato plants out. I estimated how much space I would need for each one. I started to dig a hole in the earth to plant the first one.

The rest of the world disappeared for me. I was wholly immersed in this planting. I was free from any worry or concern. Only the earth and the plants existed. I felt at peace.”

8. Experiencing the Divinity of Nature while Meditating on Top of Mount Baker

Mean Presence score: 6.46

Study 1: College EFA sample

21-year-old female

“I was backpacking and just getting outdoors for a weekend. I was not doing it to get away from anything specific, but being in nature and being active always eases my stress levels - and I was stressed about all the change in my life: college, fiscal challenges, friend. I also had been practicing meditation to ease my anxiety and so naturally I decided to continue those practices on the mountain.

I was out backpacking on Mount Baker and we had just set up camp. The sun was setting and washed the grassy slope and shallow pond that looked like an infinity pool in gold. My feet were dangling off the edge of the ponds bank and I decided to meditate and appreciate such a moment on a deeper level.

During my meditation, I kept my eyes open so I could absorb the view of the mountains. If my mind ever wandered to any place I did not want it to, I would come back to the sound of the trickling creek or wind. I felt very light and tranquil and all my worries felt like distant memories. I think it was being surrounded by such beautiful nature and the fact that I was being intentionally mindful and appreciative of my existence that made me feel connected to something larger - because how could something so beautiful be created and I not feel there was some sort of divinity out there?”

9. Feeling Blessed to be Alive on an Autumn Drive

Mean Presence score: 6.43

Study 2: U.S National EFA sample

58-year-old male

“I had been home sick for nearly a week and stuck inside the house during beautiful fall weather. I woke up one day in November in Ohio with the temperatures almost 70 degrees and faint from lack of eating and dehydrated and managed to get my appetite back and hold down breakfast with a cup of hot tea and started to feel better so decided to venture out.

I gathered my two dogs and drove my pickup truck one hour north to my mom's house and the longer I drove the more peaceful and calm and recovered I felt. The sky was as blue as I had ever seen it and the fall leaves were spectacular colors. One dog was sitting up watching the countryside pass through the window while the other dog snoozed lazily on my lap and I remember thinking this is as good as life gets with everything in sync and the warm air flowing in through the part open window was like a stream of fresh air full of life.

As I travelled the empty country roads I remember feeling completely connected to the earth and all of nature's beauty. An extraordinary autumn experience for a nature lover just feeling blessed to feel so alive and to have recovered from being sick I was now ready to just relax and experience the beauty of life and the gift of the day.”

10. Alleviating Mental Health Problems Through Peaceful Breathing Meditation

Mean Presence score: 6.36

Study 2: U.S. National EFA sample

27-year-old male

“I was doing especially bad that week, in terms of mental health. So I had begun to research on ways I might be able to help myself in the here and now. I happened on a forum post suggesting meditation as a way to alleviate these problems.

I was in my room, laying down, eyes closed. I had a video playing throughout my room, I believe it was called something to the effect of healing bells. I blocked my mind off to the outside world and just laid there.

I felt at peace with myself for once in my life. None of the issues I had been dealing with were hurting me in that moment. I could just lay there and breathe peacefully. I was overcome with a great sense of calmness and a sort of joy as this was the first time in as long as I can remember where I didn't feel like life was out to get me.”

11. A Proud Parent Moment

Mean Presence score: 6.36

Study 2: U.S. National EFA sample

41-year-old female

“I was told my daughter was receiving a citizenship award at school. I was invited to come to a ceremony that she was going to be presented with her reward at. I and my husband attended the ceremony.

I was watching her get her reward and just felt so in the moment and at peace. I felt a sense of pride at that moment that was so strong. I felt like part of a larger existence in that I was raising someone that will be part of the larger community someday and make a difference.

I felt a lot of love and pride. I felt such a warmth seeing my daughter up there. I felt so at peace knowing that she was turning into a great person.”

12. Finding Bliss at a Small Concert Venue

Mean Presence score: 6.36

Study 2: National EFA sample

55-year-old female

“I had the opportunity to get away with a friend and see one of my favorite singers in concert. In the weeks leading up to the show, I was excited thinking about it, as I have never had the opportunity before to see him. I also was looking forward to spending a night away with my friend, as we have not had as much time together recently due to our busy lives.

The show was in a small venue, and as soon as he came on stage, I lost myself to the night and the music. I was in awe of seeing and hearing him live and a real feeling of tranquility and happiness came over me. I was in the moment the whole time, never taking my phone out or taking any pictures or video. It was pure bliss, and I was enjoying the music and my surroundings. I felt at one with the others in the audience as well as the performers on stage. //

I was so relaxed and just enjoying the music, my surroundings and the company of my friend. At that point, I was enjoying the experience, and all of my everyday worries and concerns fell away. I felt alive and happy and very content. It felt exhilarating to do someone just for me, and I loved every minute of it.”

13. Holding the Nurse's Hand in Prayer

Mean Presence score: 6.36

Study 2: National EFA sample

78-year-old female

“Earlier this week I was scheduled to meet with my primary physician to discuss my blood pressure and whether or not a change might need to be made in my medication. When getting out of bed, I just felt like something was not quite right. I immediately checked my blood pressure and found that it was unusually high. After showering and dressing for my appointment, I checked it again and found that it was even higher this time. Since I was not experiencing any other symptoms, I left to keep my appointment.

Once the nurse at the clinic had checked my blood pressure she also told me that it was much higher than it should normally be. I told her about my experiences at home that morning and how I felt that something was not right. Before she left the exam room, I asked her to pray for me. She immediately took my hand and began to pray.

I felt such comfort from just holding her hand while she was praying. Then I realized that I was not only feeling comforted by her presence and prayer but felt that a great burden was being lifted from my consciousness and my body. I suddenly realized that whatever was in store for me on this day, I would be able to handle it much better because of this prayer. I told her that I was very grateful for her thoughtfulness and kind consideration.”

14. A Peaceful Encounter with Swans and Nature on My Daily Walk

Mean Presence score: 6.21

Study 2: National EFA sample

75-year-old female

“I take a 2 mile walk for exercise daily unless the weather is bad. I pass by a large pond every day that usually has 3 swans swimming in it. On the day of the experience I have in mind, I approached the pond as usual. It was a bright sunny day in the 70's and there was literally no one else at all at the pond's edge that day.

I just stood on the side of the pond, taking in the entire view of the pond surrounded by forest with the three swans swimming. I felt entirely peaceful, although aware, of the entire surroundings and was thinking of nothing going on in my life at all. I felt "one" with the natural surroundings, part of it and with a sense of freedom and release. It was a completely calming experience.

My mind was free of thoughts in the form of sentences. I was literally thinking about nothing at all, just absorbing the surrounding quiet and listening to the sounds of the pond - rustling leaves, water lapping up on the sides of the pond, birds fluttering by. The sensation was of complete peacefulness and of being a "part" of the pond and forest.”

15. Floating on Cloud Nine: The Sensation of Retirement

Mean Presence score: 6.14

Study 2: National EFA sample

52-year-old male

“The feeling I had after working for 30 years getting up for work, going to bed at a decent hour to get enough rest for the next day for work. My first day of retirement I just laid in bed looking up at the ceiling smiling to myself basking in the feeling of being totally free from working. The sensation made me feel like I was floating among the clouds.

I was at home in my bed just laying there enjoying my freedom. I was home alone so I had the time to reflect and dwell on the feelings I was having. I just laid there not thinking about nothing at all, just allowing my new reality to sink in.

The feelings I was having was almost unreal. My mind was so relaxed and at peace I felt as if I was floating. I was totally free from having to work gave the the sensation of being reborn, renewed and refreshed.

Appendix D*Toronto Mindfulness Scale (Lau et al., 2006)*

	Not at all	A little	Moderately	Quite a bit	Very much
I was curious about each of the thoughts and feelings I was having.	0	0	0	0	0
I experienced my thoughts more as events in my mind than as a necessarily accurate reflection of the way things 'really' are.	0	0	0	0	0
I was aware of my thoughts and feelings without over-identifying them.	0	0	0	0	0
I was curious about what I might learn about myself by taking notice of how I react to certain thoughts, feelings, or sensations.	0	0	0	0	0
I was curious about my reactions to things.	0	0	0	0	0
I was more concerned with being open to my experiences than controlling or changing them.	0	0	0	0	0
I approached each experience by trying to accept it, no matter whether it was pleasant or unpleasant.	0	0	0	0	0
I experienced myself as separate from my changing thoughts and feelings.	0	0	0	0	0
I was receptive to observing unpleasant thoughts and feelings without interfering with them.	0	0	0	0	0
I was curious about what I might learn about myself by just taking notice of what my attention gets drawn to.	0	0	0	0	0
I remained curious about the nature of each experience as it arose.	0	0	0	0	0

I was more invested in just watching my experiences as they arose, than in figuring out what they could mean.

o o o o o

I was curious to see what my mind was up to from moment to moment.

o o o o o

Appendix E*Flow State Scale (Jackson & Marsh, 1996)*

	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
I really enjoyed the experience.	0	0	0	0	0
I was not worried about my performance during the event.	0	0	0	0	0
I was aware of how well I was performing.	0	0	0	0	0
The experience left me feeling great.	0	0	0	0	0
I knew clearly what I wanted to do.	0	0	0	0	0
I was not concerned with what others may have been thinking of me.	0	0	0	0	0
My attention was focused entirely on what I was doing.	0	0	0	0	0
I knew what I wanted to achieve.	0	0	0	0	0
It was no effort to keep my mind on what was happening.	0	0	0	0	0
It was really clear to me that I was doing well.	0	0	0	0	0
I felt I was competent enough to meet the high demands of the situation.	0	0	0	0	0
It felt like time stopped while I was performing.	0	0	0	0	0
I felt like I could control what I was doing.	0	0	0	0	0
I really enjoyed the experience.	0	0	0	0	0
I knew what I wanted to achieve.	0	0	0	0	0
At times, it almost seemed like things were happening in slow motion.	0	0	0	0	0
I performed automatically.	0	0	0	0	0
It was really clear to me that I was doing well.	0	0	0	0	0

It was no effort to keep my mind on what was happening.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was not worried about my performance during the event.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I did things spontaneously and automatically without having to think.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
At times, it almost seemed like things were happening in slow motion.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt like I could control what I was doing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My attention was focused entirely on what I was doing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I performed automatically.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It was really clear to me that I was doing well.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It was no effort to keep my mind on what was happening.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was completely focused on the task at hand.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My attention was focused entirely on what I was doing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I had total concentration.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My abilities matched the high challenge of the situation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was completely focused on the task at hand.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was challenged, but I believed my skills would allow me to meet the challenge.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I had a strong sense of what I wanted to do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt in total control of my body.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I did things spontaneously and automatically without having to think.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My goals were clearly defined.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix F

Ego-Dissolution Inventory (Nour et al., 2016)

	Slider scale
I felt far less absorbed by my own issues and concerns	0 (No, not more than usually) – 100 (Yes, I experienced this completely/entirely)
I experienced a dissolution of my "self" or ego	0 (No, not more than usually) – 100 (Yes, I experienced this completely/entirely)
I lost all sense of ego	0 (No, not more than usually) – 100 (Yes, I experienced this completely/entirely)
I experienced a decrease in my sense of self-importance	0 (No, not more than usually) – 100 (Yes, I experienced this completely/entirely)
I felt at one with the universe	0 (No, not more than usually) – 100 (Yes, I experienced this completely/entirely)
All notion of sense and identity dissolved away	0 (No, not more than usually) – 100 (Yes, I experienced this completely/entirely)
I felt a sense of union with others	0 (No, not more than usually) – 100 (Yes, I experienced this completely/entirely)
I experienced a disintegration of my "self" or ego	0 (No, not more than usually) – 100 (Yes, I experienced this completely/entirely)

Note. In Qualtrics, participants responded to each item on a slider scale from 0 to 100 with endpoints labeled as shown above.

Appendix H

Brief State Rumination Inventory (Marchetti et al., 2018)

	Slider scale
I wondered why I always feel the way I do.	0 (completely disagree) – 100 (completely agree)
I wondered why I couldn't respond in a better way.	0 (completely disagree) – 100 (completely agree)
I was thinking: “why can't I handle things better?”	0 (completely disagree) – 100 (completely agree)
I wondered why I react the way I do.	0 (completely disagree) – 100 (completely agree)
I was rehashing in my mind recent things I've said or done.	0 (completely disagree) – 100 (completely agree)
I was thinking: “why do I have problems other people don't have?”	0 (completely disagree) – 100 (completely agree)
I was reflecting about my mood.	0 (completely disagree) – 100 (completely agree)
It was hard for me to shut off negative thoughts about myself.	0 (completely disagree) – 100 (completely agree)

Note. In Qualtrics, participants responded to each item on a slider scale from 0 to 100 with endpoints labeled as shown above. The items in the original BSRI begin with “Right now,” and are phrased in the present tense. The items shown to participants are shown here, which were modified to accommodate reflection on a past experience.

Appendix I

Self-Reflection and Insight Scale (Grant et al., 2002)

	Strongly disagree	Disagree	Somewhat disagree	Somewhat agree	Agree	Strongly agree
I am very interested in examining what I think about	0	0	0	0	0	0
Thinking about my thoughts makes me more confused	0	0	0	0	0	0
My behavior often puzzles me	0	0	0	0	0	0
I am usually aware of my thoughts	0	0	0	0	0	0
I have a definite need to understand the way that my mind works	0	0	0	0	0	0
I frequently examine my feelings	0	0	0	0	0	0
I don't often think about my thoughts	0	0	0	0	0	0
I'm often aware that I'm having a feeling, but I often don't quite know what it is	0	0	0	0	0	0
I don't really think about why I behave in the way I do	0	0	0	0	0	0
I usually know why I feel the way I do	0	0	0	0	0	0
Often I find it difficult to make sense of the way I feel about things	0	0	0	0	0	0
It is important to me to be able to understand how my thoughts arise	0	0	0	0	0	0
I usually have a very clear idea about why I've behaved in a certain way	0	0	0	0	0	0
I often think about the way I feel about things	0	0	0	0	0	0
I'm often confused about the way that I really feel about things	0	0	0	0	0	0
It is important to me to try to understand what my feelings mean	0	0	0	0	0	0
It is important for me to evaluate the things that I do	0	0	0	0	0	0
I frequently take time to reflect on my thoughts	0	0	0	0	0	0
I rarely spend time in self-reflection	0	0	0	0	0	0
I am not really interested in analyzing my behavior	0	0	0	0	0	0

Note. In Qualtrics, each item option column (e.g., Strongly disagree, Disagree) was equally spaced.

Appendix J*Big Five Inventory (John et al., 1991)*

	Strongly Disagree	Disagree a little	Neither agree nor disagree	Agree a little	Strongly agree
Is talkative	0	0	0	0	0
Tends to find fault with others	0	0	0	0	0
Does a thorough job	0	0	0	0	0
Is depressed, blue	0	0	0	0	0
Is original, comes up with new ideas	0	0	0	0	0
Is reserved	0	0	0	0	0
Is helpful and unselfish with others	0	0	0	0	0
Can be somewhat careless	0	0	0	0	0
Is relaxed, handles stress well	0	0	0	0	0
Is curious about many different things	0	0	0	0	0
Is full of energy	0	0	0	0	0
Starts quarrels with others	0	0	0	0	0
Is a reliable worker	0	0	0	0	0
Can be tense	0	0	0	0	0
Is ingenious, a deep thinker	0	0	0	0	0
Generates a lot of enthusiasm	0	0	0	0	0
Has a forgiving nature	0	0	0	0	0
Tends to be disorganized	0	0	0	0	0
Worries a lot	0	0	0	0	0
Tends to be lazy	0	0	0	0	0
Is emotionally stable, not easily upset	0	0	0	0	0
Is inventive	0	0	0	0	0
Has an assertive personality	0	0	0	0	0
Can be cold and aloof	0	0	0	0	0
Perseveres until the task is finished	0	0	0	0	0

Can be moody	0	0	0	0	0
Values artistic aesthetic experiences	0	0	0	0	0
Is sometimes shy, inhibited	0	0	0	0	0
Is considerate and kind to almost everyone	0	0	0	0	0
Does things efficiently	0	0	0	0	0
Remains calm in tense situations	0	0	0	0	0
Prefers work that is routine	0	0	0	0	0
Is outgoing, sociable	0	0	0	0	0
Is sometimes rude to others	0	0	0	0	0
Makes plans and follows through with them	0	0	0	0	0
Gets nervous easily	0	0	0	0	0
Likes to reflect, play with ideas	0	0	0	0	0
Has few artistic interests	0	0	0	0	0
Has an active imagination	0	0	0	0	0
Tends to be quiet	0	0	0	0	0
Is generally trusting	0	0	0	0	0
Likes to cooperate with others	0	0	0	0	0
Is easily distracted	0	0	0	0	0
Is sophisticated in art, music, or literature	0	0	0	0	0

Appendix K

Final Presence Scale

	Not at all	Very slightly	A little	Moderately	Quite a bit	Very much	Completely
My mind felt like a calm, clear lake.	o	o	o	o	o	o	o
There were moments when my mind felt still.	o	o	o	o	o	o	o
My mind was free from inner dialogue.	o	o	o	o	o	o	o
My mind felt settled.	o	o	o	o	o	o	o
I sensed at the time that I was fully alive in the moment.	o	o	o	o	o	o	o
I was conscious of myself experiencing the moment.	o	o	o	o	o	o	o
I welcomed what was happening to me for what it was.	o	o	o	o	o	o	o
My heart was open to the full experience.	o	o	o	o	o	o	o
I found myself receptive to the experience as it unfolded.	o	o	o	o	o	o	o
I felt a part of myself expanding outward.	o	o	o	o	o	o	o
My consciousness extended outward as if toward a horizon.	o	o	o	o	o	o	o
My sense of self faded as I became part of something greater.	o	o	o	o	o	o	o
I seemed to merge with something beyond myself.	o	o	o	o	o	o	o
I felt my self merging with everything, as though I were a wave that merged back into the ocean.	o	o	o	o	o	o	o

Note. Participants were instructed to think back to a prior experience and then “please indicate the extent to which each statement below describes your experience”. In Qualtrics, each item option column (e.g., Not at all, Very slightly) was equally spaced. Items 1-4 measure Stillness of Mind, items 5-9 measure Present Moment Awareness, and items 10-14 measure Consciousness Beyond Self.

Scoring: Not at all = 1, Very Slightly = 2, A little = 3, Moderately = 4, Quite a bit = 5, Very much = 6, Completely = 7. Scores of all 14 items are summed to calculate a Presence Score, with higher scores indicating greater Presence.