



ASSESSING EQUANIMITY IN A THAI BUDDHIST CONTEXT: PSYCHOMETRIC VALIDATION OF THE THAI EQUANIMITY SCALE-16

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Abstract

Background and Objectives: Equanimity (Upekkhā) is a foundational virtue in Theravāda Buddhist psychology and a central Brahmavihāra representing emotional balance. Despite its doctrinal prominence, empirical operationalization of equanimity in Thai Buddhist contexts remains limited. In contemporary psychology, equanimity is often conceptualized as affective neutrality or emotional detachment, obscuring its ethical and wisdom-based dimensions emphasized in Buddhist thought. In contrast, Thai Theravāda traditions understand upekkhā as a balanced mode of awareness grounded in insight (Paññā), sustained by compassion (Karūṇā), and characterized by non-attachment (Anupādāna) rather than emotional indifference. Within this framework, equanimity enables practitioners to encounter experiences without reactivity while maintaining ethical awareness. Although equanimity is widely cultivated in Thai contemplative traditions, existing psychological measures often operationalize it primarily as emotional regulation or reduced reactivity, overlooking the doctrinal meaning of upekkhā in Theravāda Buddhism. The present study aimed to examine the factorial structure, reliability, and convergent validity of the Thai version of the Equanimity Scale-16 (ES-16), while also evaluating its conceptual coherence with Buddhist understandings of upekkhā within a Thai cultural context.

Methodology: Two independent samples of Thai mindfulness-oriented adults participated. The primary sample included 437 participants who completed the Thai Equanimity Scale-16 (ES-16) and the Self-Other Four Immeasurables Scale (SOFI), which assesses loving-kindness, compassion, appreciative joy, and equanimity toward self and others within the Brahmavihāra framework. A secondary subsample from monastic-university networks (n = 211) completed a second administration of the ES-16 one week later to evaluate temporal stability. Confirmatory Factor Analysis (CFA) was conducted using the Weighted Least Squares Mean and Variance Adjusted (WLSMV) estimator, appropriate for ordinal Likert-type data, to examine the hypothesized two-factor structure of Experiential Acceptance (EA) and Non-Reactivity (NR). Internal consistency, test-retest reliability, and convergent validity were assessed.

Main Results: The hypothesized two-factor model demonstrated excellent fit to the data ($\chi^2(76) = 89.8, p = .134; CFI = 0.994; TLI = 0.990; RMSEA = 0.020; SRMR = 0.028$), supporting the structural



validity of the Thai ES-16. Standardized loadings were adequate to strong, and the latent correlation between EA and NR indicated distinct but related dimensions of equanimity. Internal consistency was high ($\alpha = .84$; $\omega = .84$), and test-retest reliability over one week was strong ($r = .89$, $p < .001$). Convergent validity was supported through theoretically coherent associations with the SOFI, indicating that higher equanimity was associated with greater benevolence and fewer aversive tendencies, consistent with Buddhist accounts of equanimity as insight (Paññā)-informed non-attachment accompanied by compassion (Karunā).

Involvement to Buddhadhamma: The Thai ES-16 operationalizes upekkhā consistent with its doctrinal meaning in Theravāda Buddhist psychology. Equanimity is conceptualized as a balanced, compassion-infused form of non-reactive awareness cultivated through insight meditation (Vipassanā). Within the Brahmavihāras, upekkhā regulates craving and aversion while preserving ethical orientation and concern for others. This framing differentiates equanimity from apathy or indifference and reflects its role in Buddhist mental cultivation. This study, therefore, contributes to the application of Buddhist teachings in contemporary psychological research, particularly within the domain of Applied Buddhism related to the development of wisdom and morality.

Conclusions: The Thai ES-16 demonstrates strong psychometric properties and cultural-doctrinal coherence for assessing equanimity as conceptualized in Theravāda Buddhist psychology. Its reliability and validity support its use in research on contemplative mechanisms and wisdom-compassion dynamics in Thai Buddhist contexts. By providing the first Thai quantitative measure of equanimity grounded in classical interpretations of upekkhā and modern psychometric standards, this study contributes to Buddhist-informed psychological assessment, contemplative science, and cross-cultural research, and future studies should examine its generalizability across diverse cultural contexts and clinical populations.

Keywords: Equanimity, Buddhist Psychology, Experiential Acceptance, Non-Reactivity

Introduction

Equanimity, often rendered in Thai discourse as *ploi-wang*, refers to an even-minded composure toward pleasant and unpleasant experiences alike. In early Buddhist texts, equanimity (Upekkhā) is described as one of the four Brahmavihāras (Divine Abodes) together with loving-kindness (Mettā), compassion (Karunā), and sympathetic joy (Muditā), a set of qualities cultivated for the development of an ethically balanced mind (Bhikkhu Bodhi, 2000); (Bhadantācariya Buddhaghosa, 2010). It is explicitly distinguished from apathy by its clarity, ethical sensitivity, and balanced concern for both self and others (Gethin, 1998); (Bhikkhu Bodhi, 2005); (Harvey, 2013). Rather than emotional disengagement, upekkhā denotes a mature quality of awareness grounded in insight and sustained by compassion, enabling practitioners to remain present without being driven by craving or aversion. Contemporary psychology converges on this view, defining equanimity as a trait-like tendency toward nonreactive, impartial awareness that stabilizes attention and affect, particularly under emotionally salient conditions (Kabat-Zinn, 2003); (Desbordes et al., 2015). Although equanimity overlaps conceptually with constructs such as acceptance, non-judgment, and emotional regulation, Buddhist psychological



accounts distinguish *upekkhā* as a balanced awareness grounded in wisdom (*Paññā*) and compassion (*Karuṇā*), rather than merely reduced emotional reactivity.

A growing body of empirical research situates equanimity as a central mechanism through which contemplative practice fosters emotional balance and psychological well-being. Evidence from randomized and quasi-experimental studies indicates that mindfulness-based programs are most effective when attentional monitoring is coupled with acceptance or equanimity skills, yielding reductions in stress reactivity, loneliness, anxiety, and depression beyond monitoring-focused approaches alone (Goyal et al., 2014); (Lindsay & Creswell, 2017); (Goldberg et al., 2022). Mechanistic accounts further elucidate these effects. The decoupling model, for instance, proposes that equanimity weakens habitual linkages between hedonic tone and craving-aversion responses, thereby dampening automatic reactivity and permitting more flexible, adaptive responding (Desbordes et al., 2015); (Hadash et al., 2016). Together, these accounts position equanimity not merely as an outcome of training but as an active process through which the benefits of contemplative practice accrue.

Despite its conceptual prominence, the measurement of equanimity has lagged behind the theory. This issue is particularly salient in cultural contexts where Buddhist concepts of equanimity are widely known yet interpreted in diverse ways. In Thailand, where the present study was conducted with Thai-speaking adults, such interpretations may vary across lay understandings and contemplative traditions. Definitions remain heterogeneous, and conceptual overlap with related constructs such as non-judgment and acceptance complicates discriminant validity (Sauer et al., 2013); (Juneau et al., 2020). The Equanimity Scale-16 (ES-16) advances a theoretically grounded, two-factor operationalization of Experiential Acceptance (EA) and Non-Reactivity (NR) that aligns with leading models of mindfulness-based change (Lindsay & Creswell, 2017); (Rogers et al., 2021). However, in Buddhist-majority contexts such as Thailand, culturally embedded meanings of equanimity shape lay interpretations and may increase the risk of conflation with emotional indifference. These nuances diverge from Western secular interpretations and underscore the importance of validating equanimity measures within their cultural and doctrinal context (Grossman & Van Dam, 2011). Consequently, measurement instruments developed primarily within Western psychological frameworks may not fully capture culturally embedded and doctrinally grounded interpretations of equanimity in Thai Buddhist contexts, highlighting the need for culturally grounded validation.

The present study addressed this gap by examining the factorial structure, reliability, and convergent validity of the Thai version of the ES-16 in a Thai mindfulness-oriented sample. We examined the scale's factor structure using confirmatory factor analysis, assessed internal consistency and one-week test-retest reliability, and evaluated convergent validity with the Thai Self-Other Four Immeasurable (SOFI). Given the cultural salience of interpersonal harmony in Thai Buddhist contexts, we further explore potential nuances within non-reactivity, distinguishing interpersonal from intrapersonal aspects as an ancillary question. By delivering a psychometrically sound and culturally attuned Thai measure of equanimity, this study supports mechanism-focused research and strengthens the evaluation of mindfulness-based interventions across Southeast Asian settings.



More broadly, culturally grounded assessment of equanimity may inform contemplative science, culturally sensitive mental health research, and mindfulness-based educational initiatives within Buddhist cultural contexts.

Objectives

The present study aimed to examine the factorial structure, reliability, and convergent validity of the Thai version of the Equanimity Scale-16 (ES-16), while also evaluating its conceptual coherence with Buddhist understandings of *upekkhā* within a Thai cultural context.

Methodology

The present study employed a cross-sectional psychometric validation design with a test-retest component using two independent samples, allowing separate evaluation of structural validity and temporal stability.

Participants

The total sample comprised 648 Thai-speaking adults (60.5% Male, 35.5% Female, and 4.0% Other), with a mean age of 38.93 years ($SD = 15.62$). Participants were drawn from two independent subsamples: A mindfulness meditation-oriented sample ($n = 437$) and a retest subsample recruited through monastic-university networks ($n = 211$).

Participants were recruited via social media announcements, peer referrals, and monastic-university networks. Inclusion criteria required that participants be aged 18 years or older, possess adequate literacy in Thai to complete the study materials, and report an interest in mindfulness or meditation practice. Participants in the retest subsample ($n = 211$) completed a second administration of the ES-16 one week later for the assessment of test-retest reliability.

This recruitment strategy constitutes convenience sampling and reflects typical access points for mindfulness-interested adults in Thai contemplative communities. As such, the sample may not fully represent the broader Thai population, and potential selection bias should be considered when interpreting generalizability.

Across both subsamples, participants reported varied experiences with mindfulness and meditation practices, including breath meditation (*Ānāpānasati*), body-based practices (*Kāyaḡatā-sati*), *mettā-bhāvanā*, and mixed approaches. Most participants described their practice as intermittent rather than continuous, reflecting typical patterns of engagement in everyday contemplative contexts.

This study was conducted in accordance with established ethical guidelines, including the Belmont Report, the Declaration of Helsinki, and the Council for International Organizations of Medical Sciences (CIOMS) guidelines. Ethical approval was obtained from the Research Ethics Review System for Research Involving Human Participants at Chulalongkorn University (COA No. 253/66). All participants provided informed consent prior to participation.

Demographics

Demographic characteristics of the two samples are presented in Table 1. The first sample comprised 211 participants recruited through monastic-university networks for the assessment of test-retest reliability. The second sample comprised 437 lay mindfulness practitioners who



completed both the ES-16 and SOFI measures. Demographic characteristics of both samples, including gender, age, educational attainment, religious affiliation, and mindfulness practice experience, are presented in Table 1.

Table 1 Demographic Characteristics of Two Independent Samples

Characteristic	Sample 1: Retest subsample (n = 211)	Sample 2: Main sample (n = 437)
Gender		
- Male	165 (78.2%)	227 (51.9%)
- Female	40 (19.0%)	190 (43.5%)
- Other	6 (2.8%)	20 (4.6%)
Age, Mean (SD)	43.21 (13.78)	35.67 (15.82)
Education		
- Under High School	14 (6.6%)	5 (1.1%)
- Secondary Education	35 (16.6%)	28 (6.4%)
- Bachelor's, Master's	151 (71.6%)	269 (84.4%)
- Doctoral or Higher	11 (5.2%)	35 (8.0%)
Religious Affiliation		
- Buddhist	206 (97.6%)	420 (96.1%)
- Christian	-	10 (2.3%)
- Islamic	-	2 (0.5%)
- Multiple Religions	3 (1.4%)	3 (0.7%)
- No Religion	2 (0.9%)	2 (0.5%)
Mindfulness practice		
- Practice	189 (89.6%)	358 (81.9%)
- No practice	22 (10.4%)	79 (18.1%)

Note: Sample 1: Retest subsample (Recruited Via Monastic, University Networks) (n = 211), Sample 2: Main sample (ES-16 × SOFI group) (n = 437)

Procedure

Participants accessed the survey via an online platform. After reviewing the participant information sheet, eligibility was confirmed (Thai-speaking Adults Aged 18 Years or Older), and informed consent was provided electronically by selecting the designated consent option. The survey comprised a demographic questionnaire, the Thai version of the Equanimity Scale-16 (ES-16), and the Thai version of the Self-Other Four Immeasurable (SOFI) scale. Participants were invited to provide an email address for follow-up, enabling a second survey administration one week later to assess test-retest reliability.

Measures

Equanimity Scale-16 (ES-16), Thai Version

The Thai version of the Equanimity Scale-16 (ES-16) is a self-report measure designed to assess equanimity across two dimensions: Experiential Acceptance (EA) and Non-Reactivity (NR), with eight items per subscale. The translation followed Brislin's back-translation procedure to



ensure linguistic accuracy and cultural appropriateness. The original English items were translated into Thai and independently back-translated into English, and discrepancies were reviewed by an expert panel to ensure conceptual equivalence within the Thai cultural and linguistic context. Items are rated on a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree), yielding total scores from 16 to 80, with higher scores indicating greater equanimity.

The ES-16 was developed based on traditional Buddhist and empirical psychological conceptualizations of equanimity, capturing the capacity to accept experiences without resistance and to disengage from automatic emotional reactivity. The original scale demonstrated strong psychometric properties, including high internal consistency (Cronbach's $\alpha = .88$), test-retest reliability ($r = .87, p < .001$), and convergent validity (Rogers et al., 2021), supporting its adaptation for use in the Thai cultural context.

Self-Other Four Immeasurables (SOFI), Thai Version

The Thai version of the Self-Other Four Immeasurables (SOFI) scale (Saenubon et al., 2020), adapted from Kraus & Sears (2009), assesses the four immeasurable qualities using paired adjectives representing each quality and its opposing tendencies. Participants rate each adjective as it applies to themselves and to others; The item assessing jealousy is rated only toward others due to conceptual considerations. The Thai SOFI has demonstrated satisfactory internal consistency ($\alpha = .86$) and convergent validity.

Data Analyses

Statistical analyses were conducted using Jamovi version 2.3.28. Confirmatory Factor Analysis (CFA) was performed to examine the latent structure of the Thai Equanimity Scale-16 (ES-16) using the Weighted Least Squares Mean and Variance Adjusted (WLSMV) estimator. This estimator was selected due to the ordinal nature of Likert-type items, for which WLSMV provides more accurate parameter estimates and model fit indices than maximum likelihood methods (Li, 2016); (Shi & Maydeu-Olivares, 2020).

Model fit was evaluated using multiple indices, including the Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Squared Residual (SRMR) (Hu & Bentler, 1999); (Berle et al., 2011). Following commonly accepted guidelines, good model fit was indicated by CFI and TLI values of .95 or higher, RMSEA values below .06, and SRMR values below .08 (Hu & Bentler, 1999). Given evidence that the performance of certain fit indices may vary under WLSMV estimation when applied to ordered categorical data, interpretation was undertaken with methodological caution, and particular attention was directed to SRMR as a comparatively stable indicator under ordinal estimation conditions (Xia & Yang, 2019).

Internal consistency was assessed using the model-based coefficient omega (Flora, 2020). Convergent validity was examined through Pearson correlation coefficients between ES-16 scores and scores on the Self-Other Four Immeasurable (SOFI) scale. Test-retest reliability was evaluated by correlating ES-16 scores obtained at baseline and at a one-week follow-up. Gender differences in ES-16 subscale scores were examined using independent-samples t-tests, and associations with age were assessed using Pearson correlation coefficients.



Results and Discussion

Preliminary Analyses

Prior to conducting the confirmatory factor analysis, preliminary analyses were performed to evaluate the suitability of the ES-16 data for factor analysis. Table 2 presents the intercorrelation between the two observed subscales, Experiential Acceptance (EA) and Non-Reactivity (NR). The two subscales were modestly but significantly correlated ($r = .232, p < .001$), indicating that they represent related yet distinct facets of equanimity.

The adequacy of the dataset for factor analysis was further supported by Bartlett's test of sphericity ($\chi^2 = 2360, df = 120, p < .001$) and a Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy of 0.863, which is considered meritorious. These results indicate that the inter-item correlations were sufficient to justify proceeding with confirmatory factor analysis.

Table 2 Correlation Matrix of Observable Variables in the ES-16 Two-Factor Model

Variables	EA	NR
EA	1.000	.232***
NR	.232***	1.000

Bartlett's Test of Sphericity: $\chi^2 = 2360, df = 120, p < .001, KMO = .863$

*** $p < .001$

Confirmatory Factor Analysis

Confirmatory factor analyses were conducted to examine the theoretically proposed two-factor model distinguishing Experiential Acceptance (EA) and Non-Reactivity (NR). The refined two-factor model demonstrated excellent fit to the data after allowing three theoretically justifiable minor cross-loadings ($\chi^2(76) = 89.8, p = .134; CFI = 0.994; TLI = 0.990; RMSEA = 0.020 [90\% CI = 0.00-0.035]; SRMR = 0.028$). A comparison of model fit indices between the original English ES-16 and the Thai ES-16 is presented in Table 3.

Standardized factor loadings ranged from 0.46 to 0.89 (all $p < .001$), indicating adequate to strong associations between observed items and their respective latent factors. The latent correlation between EA and NR was moderate ($r = .31, p < .001$), supporting the conceptualization of equanimity as comprising related yet distinct dimensions.

Three items (E04, E08, and E14) exhibited minor cross-loadings on the non-target factor. These cross-loadings were theoretically coherent and reflect the experiential overlap between receptive awareness and emotional non-reactivity described in contemplative practice. Retaining these items improved overall model fit without compromising the interpretability or structural integrity of the two-factor solution. Accordingly, the refined two-factor model was retained for subsequent reliability and validity analyses.



Table 3 Model Fit Comparison Between the Original and Thai ES-16 Two-Factor Models

Fit Index	Acceptance Criteria	Original ES-16	Thai ES-16	Evaluation
χ^2	Close to 0	426.925	89.800	Thai model passed
df	-	103	76	-
χ^2/df	≤ 2	4.145	1.182	Thai model passed
CFI	$\geq .95$	0.948	0.994	Thai model passed
TLI	$\geq .95$	0.940	0.990	Thai model passed
RMSEA	$< .06$	0.089	0.020	Thai model passed
SRMR	$< .08$	0.054	0.028	Thai model passed

Note. Model fit criteria follow Hu & Bentler (1999). Original English model values were extracted from Cheever et al. (2023). SRMR was emphasized as the most robust index under WLSMV estimation (Xia & Yang, 2019).

Reliability

The Thai ES-16 demonstrated strong internal consistency and short-term temporal stability. For the total scale, Cronbach's α was .837 and McDonald's ω was .838. Subscale reliabilities were likewise high (EA α = .820; NR α = .854). Over a one-week interval, test-retest reliability coefficients were $r = .886$ for the total score, $r = .802$ for EA, and $r = .890$ for NR (all $p < .001$). Item-level stability across time was also strong ($\alpha = .914$ for ES01-ES16). These findings indicate that the Thai ES-16 assesses a stable dispositional construct rather than transient state-like fluctuations.

Convergent Validity

Convergent validity of the ES-16 was supported through theoretically consistent associations with the Self-Other Four Immeasurables (SOFI; As shown in Table 4). The ES-16 total score correlated positively with SOFI-positive qualities ($r = .39$, $p < .001$) and negatively with SOFI-negative qualities ($r = -.47$, $p < .001$).

At the subscale level, Experiential Acceptance (EA) was positively associated with SOFI-positive qualities ($r = .42$, $p < .001$) and weakly negatively associated with SOFI-negative qualities ($r = -.17$, $p < .001$). In contrast, Non-Reactivity (NR) showed a smaller positive association with SOFI-positive qualities ($r = .22$, $p < .001$) but a stronger negative association with SOFI-negative qualities ($r = -.52$, $p < .001$). These differential patterns suggest that EA is more closely linked to approach-oriented and benevolent affective qualities, whereas NR primarily reflects the attenuation of aversive and reactive tendencies.

Together, these results provide clear evidence of convergent validity for the Thai ES-16, supporting its capacity to capture both the positively oriented and aversive-reducing aspects of equanimity.

Table 4 Correlations Between ES-16 Dimensions and SOFI Subscales

Variable	ES-16 Total	EA	NR
SOFI Positive-Self	.38***	.32***	.36***
SOFI Positive-Other	.27***	.27***	.20***
SOFI Negative-Self	-.45***	-.35***	-.47***



Table 4 Correlations Between ES-16 Dimensions and SOFI Subscales (Continued)

Variable	ES-16 Total	EA	NR
SOFI Negative-Other	-.41***	-.33***	-.43***

Note. All correlations are significant at $p < .001$. ES-16 = Equanimity Scale-16; EA = Experiential Acceptance; NR = Non-Reactivity; SOFI = Self-Other Four Immeasurable (Kraus & Sears, 2009).

Ancillary Analyses: Gender and Age Effects

Additional analyses examined the effects of gender and age on equanimity. A small but statistically significant gender difference was observed for the ES-16 total score, with females scoring slightly higher than males, $t(434) = -3.01, p = .003$, Cohen's $d = -0.29$. No significant gender difference was found for Experiential Acceptance (EA), $t(434) = -0.97, p = .331$, Cohen's $d = -0.09$. However, females scored higher on Non-Reactivity (NR), $t(434) = -3.46, p < .001$, Cohen's $d = -0.33$.

Age was positively associated with equanimity across dimensions, with correlation coefficients ranging from small to moderate ($r_s = .18-.37$, all $p_s < .001$). Younger participants tended to report lower equanimity, whereas older participants reported higher overall scores.

Discussion

Contributions of the Present Study

The present study validated the Thai version of the Equanimity Scale-16 (Rogers et al., 2021) in two independent samples of mindfulness practitioners and addressed three primary objectives: Examining the factorial structure of the scale, assessing its reliability, and evaluating convergent validity with the Self-Other Four Immeasurable (SOFI). The findings demonstrate that the Thai ES-16 is a psychometrically robust and culturally coherent instrument suitable for use in both monastic and lay Buddhist populations in Thailand. By extending equanimity assessment to a Thai Buddhist context, this study advances empirical research on contemplative practice, emotional regulation, and well-being, complementing applied Buddhist research demonstrating associations between Buddhist practices and psychological well-being in Thai contexts (Klangrit et al., 2025).

Factorial Structure and Psychometric Properties

Confirmatory factor analysis supported the theorized two-factor structure distinguishing Experiential Acceptance (EA) and Non-Reactivity (NR), with excellent model fit indices (CFI = .994, TLI = .990, RMSEA = .020, SRMR = .028) and clear interpretability. This structure replicates the configuration established in the original English ES-16 (Rogers et al., 2021); (Cheever et al., 2023) and confirms the conceptual distinction between accepting internal experiences and maintaining emotional composure. The moderate latent correlation between EA and NR further aligns with theoretical models describing equanimity as comprising related yet distinguishable processes.

The observed cross-loadings among three items (E04, E08, and E14) were theoretically coherent and reflect the experiential overlap between receptive awareness and non-reactive responding emphasized in contemplative traditions. Retaining these items enhanced model fit without undermining factorial clarity, suggesting that the Thai ES-16 captures the integrative nature of equanimity rather than artificially separating its components.



Validity and Psychological Correlates

Convergent validity was demonstrated through theoretically consistent associations between the ES-16 and the Self-Other Four Immeasurable (SOFI). Higher equanimity was associated with greater loving-kindness, compassion, and appreciative joy ($r = .39, p < .001$) and with lower levels of anger, cruelty, and indifference ($r = -.47, p < .001$). This pattern aligns with compassion-based and affect-regulation models, indicating that equanimity co-occurs with benevolent emotional states while attenuating aversive reactivity.

At the subscale level, Experiential Acceptance (EA) showed stronger associations with approach-oriented positive qualities, whereas Non-Reactivity (NR) exhibited stronger inverse associations with negative affective tendencies. This differentiated pattern aligns with Buddhist psychological accounts in which *upekkhā* is understood not as emotional disengagement but as a balanced integration of receptive acceptance and emotional non-attachment (*Anupādāna*). From this perspective, equanimity is cultivated alongside ethical sensitivity and compassion, reflecting an integrated mode of balanced awareness that attenuates aversive reactivity while preserving relational attunement within lived Buddhist practice contexts (Siripattanayan et al., 2024).

Demographic and Contextual Insights

The demographic profiles of the two samples provide further support for the robustness and ecological validity of the Thai ES-16. The retest subsample, recruited through monastic-university networks, included participants whose daily routines emphasized academic and institutional responsibilities rather than intensive retreat practice. Despite variability in meditation engagement, equanimity scores remained highly stable over time, supporting the characterization of equanimity as a trait-like quality shaped by long-term contemplative and ethical development. Because most participants were Buddhist and reported interest in meditation practice, equanimity scores may partially reflect culturally embedded contemplative familiarity. This sampling profile may limit generalizability to secular or non-Buddhist populations.

In the main sample of lay mindfulness practitioners, equanimity was similarly stable and demonstrated meaningful associations with age and gender. Positive associations between age and equanimity are consistent with prior research linking emotional balance to life experience and socioemotional development. Gender differences were small in magnitude, with slightly higher non-reactivity observed among female participants, potentially reflecting sociocultural patterns of emotional regulation in Thai contexts.

Together, these findings indicate that the Thai ES-16 captures equanimity as an enduring dispositional quality that generalizes across demographic characteristics and practice environments, aligning closely with both traditional Buddhist psychological accounts and contemporary psychometric models.

Originality and Body of Knowledge

The present study offers an integrated conceptual contribution to Buddhist-informed psychological research by unifying doctrinal, psychological, and empirical perspectives on equanimity



into a coherent framework, as illustrated in Figure 1. Drawing on classical Theravāda sources, upekkhā is articulated as an even-minded and balanced quality situated within the Brahmavihāras and explicitly distinguished from emotional indifference (e.g., Buddhaghosa, Visuddhimagga). This doctrinal grounding clarifies equanimity as a wisdom-informed and ethically oriented mental quality rather than a form of affective disengagement.

Within contemporary psychological scholarship, the Equanimity Scale-16 (ES-16) operationalizes this construct through two observable processes, Experiential Acceptance, and Non-Reactivity, consistent with contemplative science perspectives that conceptualize equanimity as openness to experience without habitual emotional reactivity. The empirical findings of the present study, including the confirmed two-factor structure, strong internal consistency, temporal stability, and convergent validity with the Self-Other Four Immeasurable (SOFI), provide robust support for this operationalization within a Thai Buddhist cultural context.

Collectively, this integrated model advances the body of knowledge by offering the first psychometrically validated, culturally grounded measure of equanimity that bridges classical Buddhist doctrine and contemporary psychological mechanisms. By demonstrating how upekkhā can be both theoretically faithful and empirically measurable, the study establishes a foundation for future research in Buddhist-informed psychological assessment, contemplative science, and cross-cultural validation of wisdom-based constructs. This integrative framework links doctrinal teachings on upekkhā in Theravāda Buddhism, psychological operationalization through Experiential Acceptance and Non-Reactivity, and empirical validation through psychometric analysis.



Figure 1 Integrated Framework of Upekkhā: Doctrinal Foundations, Psychological Representation, and Empirical Validation



Conclusions and Recommendations

In conclusion, the present study establishes the Thai version of the Equanimity Scale-16 (ES-16) as a psychometrically robust, conceptually coherent, and culturally grounded measure of equanimity. The findings support a two-factor structure comprising Experiential Acceptance and Non-Reactivity, demonstrate strong internal consistency and temporal stability, and confirm convergent validity across diverse practice contexts. Together, these two dimensions reflect complementary processes through which equanimity operates as both openness to experience and stability of emotional response. Collectively, these results position equanimity as a measurable, trait-like regulatory capacity integrating emotional openness with non-reactive stability, consistent with both Buddhist contemplative frameworks and contemporary models of emotion regulation. By operationalizing *upekkhā* in a manner that is theoretically faithful and empirically rigorous, the Thai ES-16 serves as a bridge between doctrinal understanding and psychological assessment, thereby advancing cross-cultural contemplative research. Nevertheless, several limitations warrant consideration. The predominantly Thai Buddhist samples may reflect culturally embedded interpretations of equanimity and practice intensity, as well as doctrinal familiarity, which were not directly assessed. Background variables were self-reported and not experimentally controlled, limiting causal inference, and the exclusive reliance on community-based self-report data precludes conclusions regarding clinical applicability. Measurement invariance across cultural and experiential groups was not formally examined, and divergent validity as well as predictive sensitivity require further empirical clarification. Future research should therefore extend validation across more diverse populations, incorporate longitudinal and intervention-based designs, formally test measurement invariance, and integrate multi-method or neuroscientific approaches to further consolidate the Thai ES-16 as a culturally sensitive and methodologically rigorous instrument for examining equanimity, emotional balance, resilience, and well-being in both contemplative and secular contexts.

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References

- Berle, D., Starcevic, V., Moses, K., Hannan, A., Milicevic, D. & Sammut, P. (2011). Preliminary validation of an ultra-brief version of the Penn State Worry Questionnaire. *Clinical Psychology & Psychotherapy*, 18(4), 339-346. <https://doi.org/10.1002/cpp.724>.
- Bhadantācariya Buddhaghosa. (2010). *The Path of Purification (Visuddhimagga)* (Ñāṇamoli, B. Trans.). Kandy, Sri Lanka: Buddhist Publication Society.
- Bhikkhu Bodhi. (2000). *The Connected Discourses of the Buddha: A Translation of the Saṃyutta Nikāya*. Boston, MA, United States of America: Wisdom Publications.
- Bhikkhu Bodhi. (2005). *In the Buddha's Words: An Anthology of Discourses from the Pali Canon*. Boston, MA, United States of America: Wisdom Publications.



- Cheever, J., Cayoun, B. A., Elphinstone, B. & Shires, A. G. (2023). Confirmation and Validation of the Equanimity Scale-16 (ES-16). *Mindfulness*, 14, 148-158. <https://doi.org/10.1007/s12671-022-02029-9>.
- Desbordes, G., Gard, T., Hoge, E. A., Hölzel, B. K., Kerr, C., Lazar, S. W., Olendzki, A. & Vago, D. R. (2015). Moving Beyond Mindfulness: Defining Equanimity as an Outcome Measure in Meditation and Contemplative Research. *Mindfulness*, 6, 356-372. <https://doi.org/10.1007/s12671-013-0269-8>.
- Flora, D. B. (2020). Your Coefficient Alpha Is Probably Wrong, but Which Coefficient Omega Is Right? A Tutorial on Using R to Obtain Better Reliability Estimates. *Advances in Methods and Practices in Psychological Science*, 3(4), 484-501. <https://doi.org/10.1177/2515245920951747>.
- Gethin, R. (1998). *The Foundations of Buddhism*. Oxford, United Kingdom: Oxford University Press.
- Goldberg, S. B., Riordan, K. M., Sun, S. & Davidson, R. J. (2022). The Empirical Status of Mindfulness-Based Interventions: A Systematic Review of 44 Meta-Analyses of Randomized Controlled Trials. *Perspectives on Psychological Science*, 17(1), 108-130. <https://doi.org/10.1177/1745691620968771>.
- Goyal, M., Singh, S., Sibinga, E. M. S., Gould, N. F., Rowland-Seymour, A., Sharma, R., Berger, Z., Sleicher, D., Maron, D. D., Shihab, H. M., Ranasinghe, P. D., Linn, S., Saha, S., Bass, E. B. & Haythornthwaite, J. A. (2014). Meditation Programs for Psychological Stress and Well-being: A Systematic Review and Meta-analysis. *JAMA Internal Medicine*, 174(3), 357-368. <https://doi.org/10.1001/jamainternmed.2013.13018>.
- Grossman, P. & Van Dam, N. T. (2011). Mindfulness, by any other name...: trials and tribulations of sati in western psychology and science. *Contemporary Buddhism*, 12(1), 219-239. <https://doi.org/10.1080/14639947.2011.564841>.
- Hadash, Y., Segev, N., Tanay, G., Goldstein, P. & Bernstein, A. (2016). The Decoupling Model of Equanimity: Theory, Measurement, and Test in a Mindfulness Intervention. *Mindfulness*, 7, 1214-1226. <https://doi.org/10.1007/s12671-016-0564-2>.
- Harvey, P. (2013). *An Introduction To Buddhism: Teachings, History and Practices* (2nd ed.). Cambridge, United Kingdom: Cambridge University Press.
- Hu, L.-T. & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6(1), 1-55. <https://doi.org/10.1080/10705519909540118>.
- Juneau, C., Pellerin, N., Trives, E., Ricard, M., Shankland, R. & Dambrun, M. (2020). Reliability and validity of an equanimity questionnaire: the two-factor equanimity scale (EQUA-S). *PeerJ*, 8, 9405. <https://doi.org/10.7717/peerj.9405>.
- Kabat-Zinn, J. (2003). Mindfulness-based interventions in context: Past, present, and future. *Clinical Psychology: Science and Practice*, 10(2), 144-156. <https://doi.org/10.1093/clipsy/bpg016>.



- Klangrit, S., Deeaom, A., Upasod, A., Azar S. A., Gomaa, A. Y. & Wu, Y. (2025). ASSOCIATIONS BETWEEN BUDDHIST PRACTICES AND MENTAL HEALTH PROMOTION IN THAI LATE ADOLESCENTS: A NATIONAL SURVEY DATA. *Journal of Buddhist Anthropology*, 10(4), 528-543.
- Kraus, S. & Sears, S. (2009). Measuring the Immeasurables: Development and Initial Validation of the Self-Other Four Immeasurables (SOFI) Scale Based on Buddhist Teachings on Loving Kindness, Compassion, Joy, and Equanimity. *Social Indicators Research*, 92, 169-181. <https://doi.org/10.1007/s11205-008-9300-1>.
- Li, C.-H. (2016). Confirmatory factor analysis with ordinal data: Comparing robust maximum likelihood and diagonally weighted least squares. *Behavior Research Methods*, 48, 936-949. <https://doi.org/10.3758/s13428-015-0619-7>.
- Lindsay, E. K. & Creswell, J. D. (2017). Mechanisms of mindfulness training: Monitor and Acceptance Theory (MAT). *Clinical Psychology Review*, 51, 48-59. <https://doi.org/10.1016/j.cpr.2016.10.011>.
- Rogers, H. T., Shires, A. G. & Cayoun, B. A. (2021). Development and Validation of the Equanimity Scale-16. *Mindfulness*, 12, 107-120. <https://doi.org/10.1007/s12671-020-01503-6>.
- Saenubon, K., Kramanon, S. & Kamphiranon, A. (2020). A STUDY AND ENHANCMENT OF THE FOUR BRAHAMAVIHARA CHARACTERSOF AN UNDERGRADUATE STUDENTS IN 5 YEARS TEACHER PROGRAM ATSRINHAKARINWIROT UNIVERSITY. *Journal of Educational Research*, 15(2), 188-201.
- Sauer, S., Walach, H., Schmidt, S., Hinterberger, T., Lynch, S., Büssing, A. & Kohls, N. (2013). Assessment of Mindfulness: Review on State of the Art. *Mindfulness*, 4, 3-17. <https://doi.org/10.1007/s12671-012-0122-5>.
- Shi, D. & Maydeu-Olivares, A. (2020). The Effect of Estimation Methods on SEM Fit Indices. *Educational and Psychological Measurement*, 80(3), 421-445. <https://doi.org/10.1177/0013164419885164>.
- Siripattanayan, P. P., Nunklam, D., Nuthongkaew, K. & Chimhad, P. (2024). HEALTH CARE ACCORDING TO THE BUDDHIST WAY OF MONKS IN PHRA PHROM DISTRICT, NAKHON SI THAMMARAT PROVINCE. *Journal of Buddhist Anthropology*, 9(2), 136-147.
- Xia, Y. & Yang, Y. (2019). RMSEA, CFI, and TLI in structural equation modeling with ordered categorical data: The story they tell depends on the estimation methods. *Behavior Research Methods*, 51, 409-428. <https://doi.org/10.3758/s13428-018-1055-2>.