

# Linguistic validation of Mindfulness Attention Awareness Scale in Filipino

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## ABSTRACT

**M**indfulness refers to a receptive attention to and awareness of present events and experience. This study provides a validated Filipino translation of the Mindfulness Attention Awareness Scale (MAAS) that can be used by other researchers in the Philippines to assess dispositional mindfulness. This is a linguistic validation study utilizing the standards of the Principles of Good Practice for Linguistic and Cultural Validation. The translated questionnaire garnered a perfect Scale Validity Content Index (SCVI) average of 1.0 for relevance and appropriateness, and a very high SCVI average of 0.994 and 0.976 for representativeness and clarity, respectively. The Item Content Validity Index (ICVI) scores ranged from 0.91 – 1.00. Both item comprehension and clarity scale ranged from 0.81 – 1.00. They were still above the cut off of 0.80. The average comprehension index was 0.90 while the average clarity

index was 0.86. The Cronbach's alpha ranged from 0.83 – 0.85 with no item lower than 0.70. The overall Cronbach's alpha score was 0.85. The Filipino translation of the MAAS had a high validity and reliability score indicating that it can be a valid and reliable armamentarium for researchers who would want to measure dispositional mindfulness.

## INTRODUCTION

Mindfulness is a kind of meditation which originated from Buddhist practice that engages an individual in full, direct, and active awareness of experienced phenomena that is maintained from one moment to the next (Shonin et al. 2014). Brown and Ryan (2020) stated that mindfulness can be considered as either a state or a dispositional trait. The latter reflects an individual's tendency to be mindful in general. Giving nonjudgmental attention to experiences allows acceptance of the present

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## KEYWORDS

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moment which is the primary goal of mindfulness interventions (Kabat-Zinn 2003).

Being mindful inhibits a person from becoming overly engrossed in thinking of a particular experience and the accompanying emotions and thoughts making him/her feel overly stressed out (Corazon et al. 2010). Current evidence supports that practicing mindfulness can promote generation of positive affect and enhance emotion regulation and inhibitory control in both children and adults (Riggs et al. 2015; Jimenez et al. 2010; Zelazo and Lyons 2012).

Brown and Ryan (2003) developed the Mindful Awareness and Attention Scales (MAAS), a 15-item questionnaire to assess dispositional mindfulness. This instrument was validated among participants who were college students and cancer patients. To create a Filipino translation of the questionnaire, this study implemented forward-backward translation, and a pilot study with 30 participants.

## METHODOLOGY

This linguistic validation study utilized the standards as set forth in the Principles of Good Practice for the Translation and Cultural Adaptation Process for Patient-Reported Outcomes (PRO) Measures for Linguistic and Cultural Validation (Wild et al. 2005). The study was given ethical clearance by the university's ethics review committee. A panel of ten experts aged 25-55 years old, included physicians, psychiatrists, psychologists, and psychometricians conducted content validation of the Filipino translation. A panel of 36 young adults aged 18 – 25 years old were included in the cognitive interview for comprehension validation. A separate group of 30 young adults answered the questionnaire for internal consistency.

### Translation process

Permission was sought from the author to translate the MAAS to Filipino. The translation process was adapted from previous validation studies on quality of life instruments (Varni et al. 2001; Varni et al. 2006; Malinit 2013).

Two local professional bilingual translators, both native Filipino and English language speakers forward translated the questionnaire to Filipino. The primary investigators worked in close coordination with the two translators and a translation committee composed of researchers with extensive experience on validation studies. Each of the translators produced independently a forward translation of the items, instructions, and response choices. The translators, primary investigators, and the translation committee discussed the two translations and agreed on a single reconciled version as done in previous studies.

In this phase, the translation of the first reconciled version of the questionnaires back into the English language was done. A local professional bilingual translator and native speaker of English were recruited. The primary investigators met with the "backward" translator to detect any misunderstandings, mistranslations, or inaccuracies in the forward version of the questionnaire. The primary investigators again coordinated with the translation committee regarding the results of this phase. Questions or instructions that posed difficulty in the backward translation were addressed.

Ten experts reviewed the Filipino translation for relevance and clarity after which this was administered to 30 participants to test substitute phrasing and to check comprehensibility, elucidation, and cultural relevance through cognitive debriefing, wherein the participants' interpretations of the translation with the original were assessed and any differences were amended.

The amended translation underwent a final review for any typographical, grammatical, and other errors which were corrected (proofreading). At the end of the process, a report was written to document the development of each translation (final report). Additional steps were taken to assess the internal consistency and test stability of the translated questionnaire.

### Content validation

A panel of ten experts consisting of physicians, psychiatrists, psychometricians, and psychologists were asked to evaluate each item in the questionnaire to determine if individual survey items were relevant to the construct being measured and if key items or indicators were omitted. They were chosen to evaluate the questionnaire based on their extensive knowledge and skills on mindfulness concepts, programs, and interventions. They evaluated each item for representativeness, clarity, relevance, and distribution. Representativeness is defined as how completely the items (as a whole) encompass the construct; clarity is how clearly the items are worded, and relevance refers to the extent each item relates to specific aspects of the construct. This was done using a Content Validation Form. Content Validity Index was used to measure the content validity by the expert panel. Items which failed the content validation were revised (Juangco and Hildalgo 2022).

### Cognitive interview

After the content validation by the experts, the translated questionnaire was further validated by those to whom the questionnaire was intended to be used. Cognitive interview was used to identify possible mistakes in the interpretation of the items or choices thereof. The cognitive interview involved 30 adult participants. Comprehension index was used to determine the validity of the translated questionnaire. Items which failed the comprehension index were revised.

### Psychometric testing

After the cognitive interview, another set of 36 adult participants, selected by convenient sampling, answered the revised translated questionnaire. The results were used to analyze the internal consistency of the translated questionnaire. The data were encoded using Microsoft Excel and analyzed using statistical software, GraphPad Prism version 9. Item Content Validity Index (ICVI), Item Content Validity Index Universal Agreement (SCVI UA) [INCONSISTENT: SCVI or ICVI], and Scale Validity Content Index (SCVI) For Content Validity, were computed. To assess understanding of the items in the translated tool, Comprehension Index (CI) was computed. To check for internal consistency, we computed for Cronbach's alpha.

## RESULTS

### Content validation

The translated questionnaire garnered a perfect Scale Content Validity Index (SCVI) average of 1.0 for relevance and appropriateness and a very high SCVI average of 0.994 and 0.976 for representativeness and clarity, respectively. The Item Content Validity Index (ICVI) ranged from 0.91 – 1.00.

### Comprehension index

Results for both items on comprehension and clarity scales ranged from 0.81 – 1.00. They were above the cut-off of 0.80, therefore, no revisions were made. The average comprehension index was 0.90, while the average clarity index was 0.86.

### Internal consistency

Cronbach's alpha was computed to determine the internal consistency of the translated questionnaire. The Cronbach's

**Table 1: Content Validation**

Question	Representativeness	Clarity	Relevance	Appropriateness
2. Maaaring makaranas ako ng ilang mga emosyon nang hindi ko namamalayan ang mga ito hanggang mapansin ko na lamang sa kalaunan. [NUMBER 1]	1.0	1.0	1.0	1.0
3. Nasira o natapon ang mga bagay dahil sa kapabayaan, hindi pagbibigay ng atensyon, o pag-iisip ng ibang mga bagay. [NUMBER 2, NOT 3]	1.0	1.0	1.0	1.0
3. Mahirap para sa akin na pagtuunan ng pansin ang mga nangyayari sa kasalukuyan.	1.0	1.0	1.0	1.0
4. Kinagawian ko na maglakad nang mabilis papunta sa aking paroroonan na hindi binibigyang pansin ang aking mga nararanasan sa daan.	1.0	0.91	1.0	1.0
5. Kinagawian ko na hindi mapansin ang pisikal na tension o kawalang ginhawa hanggang maagaw nito ang aking atensyon.	1.0	0.91	1.0	1.0
6. Nalilimutan ko ang pangalan ng isang tao kahit na kababanggit lang nito sa unang pagkakataon.	1.0	1.0	1.0	1.0
7. Parang ako ay “awtomatikong tumatakbo” nang wala gaanong kamalayan sa aking ginagawa.	1.0	1.0	1.0	1.0
8. Nagmamadali ako sa mga aktibidad nang walang gaanong kamalayan sa aking ginagawa.	1.0	0.91	1.0	1.0
9. Masyadong akong nakatutok sa layunin na gusto kong makamit na nawalan ako ng ugnayan sa aking ginagawang hakbang sa ngayon para marating iyon.	1.0	1.0	1.0	1.0
10. Gumagawa ako ng mga trabaho o gawain na awtomatiko nang hindi namamalayan ang aking ginagawa.	1.0	1.0	1.0	1.0
11. Natatagpuan ko ang aking sarili na nakikinig sa isang tao gamit ang isang tainga pero gumagawa ng ibang bagay kasabay nito.	1.0	0.91	1.0	1.0
12. Pamaneho ako sa mga lugar na parang “pilotong awtomatiko” at pagkatapos ay nagtataka bakit ako nagpunta doon.	1.0	1.0	1.0	1.0
13. Natatagpuan ko ang aking sarili na abalang nag-iisip tungkol sa hinaharap o nakaraan.	0.91	1.0	1.0	1.0
14. Natatagpuan ko ang aking sarili na gumagawa ng mga bagay nang hindi binibigyang pansin [PARANG KULANG]	1.0	1.0	1.0	1.0
15. Nagmimiryenda ako nang hindi namamalayan na ako ay kumakain.	1.0	1.0	1.0	1.0
<b>SCVI</b>	<b>0.994</b>	<b>0.976</b>	<b>1.0</b>	<b>1.0</b>

alpha ranged from 0.83 – 0.85 with no item lower than 0.70. The overall Cronbach’s alpha was 0.85.

**DISCUSSION**

Brown and Ryan (2003) reported that in their Confirmatory Factor Analysis of MAAS, there was a satisfactory correspondence between the single-factor model and the sample covariance matrix ( $\chi^2(90, N 327) = 189.57$ , goodness-of-fit index = 0.92, comparative fit index = 0.91, index of fit = 0.91, parsimony-adjusted comparative fit index = 0.78, root-mean-square error of approximation = 0.058). The latent factor was significantly related to all items of this scale (all  $p < .001$ ). The internal consistency (alpha) was 0.82. The test-retest reliability score which showed an intraclass correlation (equivalent to a Pearson  $r$  with two measures) was 0.81 ( $p < 0.0001$ ). There was one validation study conducted among an Asian population (Chinese adolescents) which evaluated the psychometric properties of the MAAS. The findings also show that the MAAS

is a sound measure of trait mindfulness among this population (Black et al. 2012)

The Filipino translated Mindful Attention Awareness Scale showed excellent reliability and validity scores. All the item content validity index scores were above the validity cut-off of 0.70, with the lowest score pegged at 0.91. It had a perfect Scale Content Validity Index (SCVI) average of 1.0 for relevance and appropriateness, and a very high SCVI average of 0.994 and 0.976 for representativeness and clarity, respectively. The comprehension index and clarity index were also above the 0.80 cut off at 0.90 and 0.86, respectively. This shows that the average Filipino would be able to easily understand the items in the questionnaire. The per item Cronbach’s alpha scores ranged from 0.83 – 0.85, while the overall Cronbach’s alpha was 0.85.

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**Table 2: Comprehension index of MAAS**

Question	Comprehension	Clarity
1. Maaaring makaranas ako ng ilang mga emosyon nang hindi ko namamalayan ang mga ito hanggang mapansin ko na lamang sa kalaunan.	0.81	0.81
2. Nasira o natapon ang mga bagay dahil sa kapabayaang hindi pagbibigay ng atensyon, o pag-iisip ng ibang mga bagay.	0.89	0.81
3. Mahirap para sa akin na pagtuunan ng pansin ang mga nangyayari sa kasalukuyan.	1.00	1.00
4. Kinagawian ko na maglakad nang mabilis papunta sa aking paroroonan na hindi binibigyang pansin ang aking mga nararanasan sa daan.	0.97	0.89
5. Kinagawian ko na hindi mapansin ang pisikal na tension o kawalang ginhawa hanggang maagaw nito ang aking atensyon.	0.86	0.81
6. Nalilimutan ko ang pangalan ng isang tao kahit na kababanggit lang nito sa unang pagkakataon.	1.00	1.00
7. Parang ako ay "awtomatikong tumatakbo" nang wala gaanong kamalayan sa aking ginagawa.	0.92	0.83
8. Nagmamadali ako sa mga aktibidad nang walang gaanong kamalayan sa aking ginagawa.	0.89	0.86
9. Masyadong akong nakatutok sa layunin na gusto kong makamit na nawalan ako ng ugnayan sa aking ginagawang hakbang sa ngayon para marating iyon.	0.83	0.81
10. Gumagawa ako ng mga trabaho o gawain na awtomatiko nang hindi namamalayan ang aking ginagawa.	0.89	0.83
11. Natatagpuan ko ang aking sarili na nakikinig sa isang tao gamit ang isang tainga pero gumagawa ng ibang bagay kasabay nito.	0.89	0.86
12. Pamaneho ako sa mga lugar na parang "pilotong awtomatiko" at pagkatapos ay nagtataka bakit ako nagpunta doon.	0.81	0.81
13. Natatagpuan ko ang aking sarili na abalang nag-iisip tungkol sa hinaharap o nakaraan.	0.92	0.86
14. Natatagpuan ko ang aking sarili na gumagawa ng mga bagay nang hindi binibigyang pansin [PARANG KULANG, PLEASE CHECK	0.94	0.86
15. Nagmimiryenda ako nang hindi namamalayan na ako ay kumakain.	0.92	0.92
<b>Average</b>	<b>0.90</b>	<b>0.86</b>

0.994 and 0.976 for representativeness and clarity, respectively. The comprehension index and clarity index were also above the 0.80 cut off at 0.90 and 0.86, respectively. The per item Cronbach's alpha scores ranged from 0.83 to 0.85, while the overall Cronbach's alpha was 0.85.

The Filipino translation of the MAAS can be a valid and reliable armamentarium for dispositional mindfulness. It indicates that the Filipino translated version of MAAS retains good validity properties.

#### CONFLICT OF INTEREST

All authors have no conflict of interest.

#### CONTRIBUTIONS OF INDIVIDUAL AUTHORS

JG Juangco, JM Naites, JP Malinit, and JJM Naites contributed to the conceptualization of the study, data acquisition and analysis, writing and reviewing of draft, and approval of the final manuscript for publication. All authors agree to be accountable for all aspects of the work. All authors declare that the manuscript's data, figures, graphs, calculations, etc. are authentic.

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**Table 3: Internal Consistency of MAAS determined Cronbach Alpha coefficient scores**

Question	Cronbach's Alpha
1. Maaaring makaranas ako ng ilang mga emosyon nang hindi ko namamalayan ang mga ito hanggang mapansin ko na lamang sa kalaunan.	0.847079
2. Nasira o natapon ang mga bagay dahil sa kapabayaan, hindi pagbibigay ng atensyon, o pag-iisip ng ibang mga bagay.	0.853802
3. Mahirap para sa akin na pagtuunan ng pansin ang mga nangyayari sa kasalukuyan.	0.831988
4. Kinagawian ko na maglakad nang mabilis papunta sa aking paroroonan nang hindi binibigyang pansin ang aking mga nararanasan sa daan.	0.832917
5. Kinagawian ko na hindi mapansin ang pisikal na tension o kawalang ginhawa hanggang maagaw nito ang aking atensyon.	0.842798
6. Nalilimutan ko ang pangalan ng isang tao kahit na kababanggit lang nito sa unang pagkakataon.	0.839885
7. Parang ako ay "awtomatikong tumatakbo" nang wala gaanong kamalayan sa aking ginagawa.	0.839863
8. Nagmamadali ako sa mga aktibidad nang walang gaanong kamalayan sa aking ginagawa.	0.82811
9. Masyado akong nakatutok sa layunin na gusto kong makamit na nawalan ako ng ugnayan sa aking ginagawang hakbang sa ngayon para marating iyon.	0.844662
10. Gumagawa ako ng mga trabaho o gawain na awtomatiko nang hindi namamalayan ang aking ginagawa.	0.831142
11. Natatagpuan ko ang aking sarili na nakikinig sa isang tao gamit ang isang tainga pero gumagawa ng ibang bagay kasabay nito.	0.834791
12. Pamaneho ako sa mga lugar na parang "pilotong awtomatiko" at pagkatapos ay nagtataka bakit ako nagpunta doon.	0.85329
13. Natatagpuan ko ang aking sarili na abalang nag-iisip tungkol sa hinaharap o nakaraan.	0.834911
14. Natatagpuan ko ang aking sarili na gumagawa ng mga bagay nang hindi binibigyang pansin [PARANG KULANG, PLEASE CHECK]	0.828563
15. Nagmimiryenda ako nang hindi namamalayan na ako ay kumakain.	0.849625

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