Adaptation of the Cognitive and Affective Mindfulness Scale (CAMS-R) to Indonesian Version and Its Validation: Muslim Mothers-Data Driven

ⓘ **Sutarto Sutarto[1]*,** ⓘ **Idi Warsah[1],** ⓘ **Khusnul Khotimah[2],** ⓘ **Endang Prastuti[3],** ⓘ **Ruly Morganna[1]**

[1]Institut Agama Islam Negeri Curup, Indonesia
[2]Universitas Islam Negeri Prof. KH. Saifuddin Zuhri Purwokerto, Indonesia
[3]Universitas Negeri Malang, Indonesia

✉ sutarto@iaincurup.ac.id*

Abstract

CAMS-R is a measurement instrument designed for normal adult participants. There have been a few studies conducting lingua-cultural adaptation of CAMS-R in the Indonesian context, but such studies have not touched on the discourse of Muslim mothers. Accordingly, this study aimed to conduct linguistic adaptation of CAMS-R by translating it into Bahasa Indonesia. Also, it aimed to examine the measurement model to find whether the structure of CAMS-R was confirmed relevant to empirical data or not. At the stage of forward translation, this study involved 5 participants, namely two translators and three psychologists with doctoral academic qualifications. The stage of back translation engaged 3 participants, namely a bachelor in English and two linguistics experts. The pilot study incorporated 10 readers, and the try-out involved 103 Muslim mothers between the ages of 20-40 years old. Data analysis used confirmatory factor analysis (CFA). Results demonstrated that the measurement of mindfulness construct had high goodness of fit. The results of model fit evaluation indicated chi square of 8.742 (p=.557), GFI of .976, AGFI of .932, CFI of 1.000, TLI of 1.014, and RMSEA of .000. The foregoing depicted a good fit of goodness. CAMS-R contained 12 items and left 7 items with loading factors above 0.5. (.585 – .887). Composite reliability (CR) sub-scale resulted in the scores of .713 – .785, and its overall CR scale was .936 and AVE of .736 – .739. The foregoing data indicated good convergent and discriminant validity. This study emphasized that CAMS-R could ideally be used to measure mindfulness for the Indonesian population of Muslim mothers between the ages of 20-40 years.

INTRODUCTION

A challenging case leading to a huge trouble due to the Covid-19 pandemic is one related to stress management, especially for Muslim mothers in Indonesia. We intentionally address Muslim mothers in this study since they are part of Muslim population as the biggest religious population in Indonesia (Warsah et al., 2019) and as the most observable for the purpose of our study. The covid-19 pandemic has trapped Indonesian Muslim mothers at a higher level of stress because they have to not only take care of house chores but also play another role as a contemporary teacher to teach their children while undertaking their online learning. In fact, such a teaching role is not something easy to be played because not all of

Muslim mothers have pedagogical knowledge and competences. In the meantime, teaching in the context of online learning requires both pedagogical and technological knowledge and competences (Asha et al., 2022; Hamengkubuwono et al., 2022; Warsah et al., 2021). Such a situation faced by Muslim mothers, by nature, triggers the increase in their psychological stress.

During a preliminary study we conducted using interviews with some accessible Muslim mothers, they reported a couple of cases demonstrating the impacts of the covid-19 pandemic on their psychology as depicted in the following verbatim records:

> "The urge of teaching my elementary school child due to this pandemic really makes me suffer from anxiety. You know, I have a psychological background of obsessive-compulsive disorder (OCD), and such an urge of taking another responsibility like teaching my child with my incompetent pedagogy leaves me very stressful. This subsequently triggers my OCD intrusive thoughts. Before this situation happened, I could handle my OCD from the CBT therapy I already received, and I was quite competent at practicing CBT. However, a different surge of challenging situation where I have to teach my child like a teacher drives me more stressful, and unfortunately now I am feeling weird because my OCD intrusive thoughts and compulsions kind of attack me back with a more powerful rumination in my mind." (Interview with Muslim mother A)

The Muslim mother A in the above transcript has already stated that she has an OCD background, but she used to be able to deal with it by means of CBT procedures she has learned from her psychiatrist. However, a sudden stressful condition due to the covid-19 pandemic by which she has to be a teacher for her child, beyond her pedagogical incapability, she finally felt that her OCD got worse again. Another case we could solicit from the field during the preliminary study is portrayed in the following transcript.

> "I am a housewife and a mother of three children. Before the covid-19 stroke, my husband and I held a business together. We opened a shop around a traditional market not really far from our house. Unfortunately, the local government has limited the duration for opening our shop, and it goes without saying that our economic condition is getting declined. You know, such a condition makes me so stressful, and I am now feeling that I cannot be so concentrated on doing my daily work because of over thinking about our economic trajectory. We hope there'll be a great solution soon" (interview with Muslim mother B)

As shown in the above transcript, the Muslim mother B demonstrated that she is suffering from distractions to concentrate on doing her daily work due to preoccupation about her family's economic decline.

Regarding the first case, OCD, dealt with the Muslim mother A, there have been a few studies which offer mindfulness practices as a solution to maintain the attacks of OCD intrusive thoughts and compulsions. For example, a study conducted by Najwa (2017), a Muslim psychiatrist, addressed the issue of OCD from the perspective of Islam, in which OCD in Islamic term is called *was was al-qahri*. In an Islamic viewpoint, *was was al-qahri* is the whisper of Satan that pops bad and sometimes blasphemous ideas in a Muslim's mind, so that the sufferer will feel that he/she has done sinful deeds. One's psychological response to it will be similar to how an OCD sufferer deals with intrusive thoughts in a way that does compulsive activities. Facing patients with *was was al-qahri*, one of the ways besides teaching patients the cognitive behavioral therapy (CBT) procedures, Najwa (2017) also

suggested her patients practicing mindfulness as an effective coping strategy. To be defined, mindfulness is to focus on "here and now" but not to get caught in preoccupations with experiences having already occurred or being anxious about things in the future that have not happened yet. The aspects of mindfulness are attention and awareness (Brown & Ryan, 2003). In a similar vein, in addressing the issue of OCD, Potter and Coyle (2017) offered a mindfulness strategy to help people who suffer from OCD. Regarding the second case experienced by Muslim mother B, Blevins et al. (2021) and Sood et al. (2019) also offered mindfulness as a coping strategy to deal with stress. The aforesaid studies showcased that mindfulness is one of the best practices to deal with OCD or *was was al-qahri* and daily psychological stress. However, in order that psychologists and psychiatrists can help patients with the mindfulness coping strategy, they have to possess an accurate assessment instrument which is empirically approved according to the patients' context (Matiz et al., 2020). The foregoing calls for the mindfulness instrument for the context of Indonesian Muslim mothers, so that the mindfulness coping strategy can be utilized in their contexts. Such an instrument can be the standard of judging and evaluating the degree of one's mindfulness level, so that further psychological treatments can be provided appropriately (Chien et al., 2020).

In the context of instrument development, there have been many studies which already construct the mindfulness instrument. For example, the initial scale for measuring mindfulness is the mindful attention awareness scale (MAAS) (Brown & Ryan, 2003), an instrument designed to measure differences in individuals' mindfulness as a state based on the absence of mindless behavior. MAAS consists of two components, namely attention and awareness, which have been proven to have strong validity. However, psychometrically, it is still questionable because it measures the state of mindfulness indirectly. Furthermore, mindfulness as a disposition is measured using the five facets mindfulness questionnaire (FFMQ) (Baer et al., 2004). The FFMQ measures some aspects which subsume observing, describing, acting with awareness, non-judging, and non-reactivity. Reviews of the literature prove that the FFMQ is psychometrically acceptable (De Bruin et al., 2012). Mindfulness as a state is measured using the Toronto mindfulness scale (TMS) (Lau et al., 2006). TMS consists of two aspects, namely curiosity and de-centering. However, there is a weakness of TMS, wherein self-regulation related to attention is not measured explicitly. Besides, it is designed to measure respondents' mindfulness after receiving mindfulness training (MBSR), meaning that it can only be applied to respondents in a limited setting. Furthermore, Cardaciotto et al. (2008) developed the Philadelphia mindfulness scale (PHL-MS), measuring two dimensions of mindfulness. The first dimension is present-moment awareness, which measures individuals' attention and awareness of thoughts, feelings, perceptions and physical sensations. The second dimension is acceptance which measures experiential avoidance. PHL-MS has been developed in clinical and non-clinical samples, but the weakness of PHL-MS is that the acceptance subscale is formulated using a negative format, by measuring experiential avoidance. Meanwhile, the aspects of non-reactivity and non-judgment are not included in the measurement.

Mindfulness measuring instruments such as the Freiburg mindfulness inventory (FMI) (Buchheld et al., 2001), the Kentucky inventory of mindfulness skill (KIMS) (Baer et al., 2004) and CAMS measure the concept of mindfulness broadly, but they are specifically for the respondents who are familiar with the principles of mindfulness. CAMS has a strength that measures multiple aspects of mindfulness in comprehensive and relatively short ways, and it is not limited to specific settings. Nonetheless, the analysis of psychometric properties is considered necessary. Therefore, Feldman et al. (2007) developed a mindfulness measurement instrument called the cognitive and affective mindfulness scale (CAMS-R). As proposed by several experts such as Feldman et al. (2007) and Kabat-Zinn (1990, 1994), CAMS-R is consistent with several definitions of mindfulness. CAMS-R has been developed

to measure the mindfulness constructs which consist of four aspects ranging from awareness, attention, focus on the present, to acceptance. Each aspect has 3 items, so there are totally 12 items. The results of a study have proven that the 12 items of CAMS-R show acceptable internal consistency, and it is evident that they have convergent and discriminatory validity based on the measurement of mindfulness congruent with distress, emotional regulation, and well-being amongst tertiary student samples (Feldman et al., 2007).

Rationale of current Study

The benefits of mindfulness to people's lives have driven researchers to work massively on mindfulness in many ways. For instance, previous studies have addressed mindfulness as the practices to cope with unpredictable dynamics of life (Stankov et al., 2020), to reach healthy life (Braun et al., 2021), to take care of children for the sake of providing attentive parenting (Cowling & Van Gordon, 2022), to provide qualified coaching in sport training (Hägglund et al., 2021), to improve self-control (Deroche, 2021), to gain healthy diet (Shaw & Cassidy, 2022), to acquire psychological well-being (Prudenzi et al., 2022), and to enhance the joy of tourism (Dutt & Ninov, 2016). Other studies have discussed mindfulness as psychological interventions or coping strategies to gain psychological healing (Simpson et al., 2021) and to deal with long-term physical diseases (Keyworth et al., 2014; Zhang et al., 2022). Another study conducted by Kelly (2022) addressed the concept of mindfulness as a psychological treatment linear with other therapies such as cognitive behavioral therapy and dialectical behavioral therapy. Some studies have positioned mindfulness as a sort meditational practice which contributes to the increase of sympathy (Ridderinkhof et al., 2017) and the reduction of occupational stress (Bolm et al., 2022). In the Indonesian context, there have also been found some studies which address the topic of mindfulness. For instance, Dyah and Fourianalistyawati (2020) sought to see the role of mindfulness in supporting elderly well-being. Subsequently, Waty and Fourianalistyawati (2018) probed into mindfulness as a practice to help youth cope with addiction associated with overused smartphones.

Studies on mindfulness, to some extent, also address the discourse of instrument development. A comprehensive and reliable instrument of mindfulness, thus far, has been represented by the cognitive and affective mindfulness scale (CAMS-R). CAMS-R is suitable for measuring mindfulness in normal adult participants. A study conducted by Candrawati et al. (2018) has proven that CAMS-R has been an effective instrument which can provide an accurate measurement during the conduction of an experimentation. Also, Prastuti (2019) has confirmed that CAMS-R is an effective instrument contributing to the provision of accurate data required by her study in developing a subjective well-being model. Literature shows that the lingual and cultural adaptation of CAMS-R instrument (Feldman et al., 2007) has been done in several languages such as Turkish (Catak, 2012), Chinese (Chan et al., 2015), Italian (Veneziani & Voci, 2015), and Portuguese (Teixeira et al., 2017). However, thus far, research on CAMS-R with the adaptation of language and culture to the Indonesian version for Indonesian population of Muslim mothers, has not yet been conducted. Accordingly, the purpose of this study is to adapt and validate Feldman's et al. (2007) CAMS-R mindfulness measurement instrument to the Indonesian version for Indonesian Muslim mothers as young adult respondents (20-40 years old). The rationale beyond the use of Feldman's et al. (2007) CAMS-R mindfulness instrument is because its theoretical model subsumes comprehensive indicators which can help psychiatrists identify one's degree of mindfulness and provide well-oriented interventions for the one in need. The aforesaid indicators entail awareness, attention, focus on the present, and acceptance.

Aim and Hypotheses of the Study

The present study aims to lingua-culturally adapt and validate Feldman's et al. (2007) CAMS-R mindfulness measurement instrument to the Indonesian version. The lingua-cultural adaptation of CAMS-R is conducted by translating the English version of CAMS-R into an Indonesian version. The translation process takes account of both interlinguistic and intercultural equivalence. Subsequently, the validation of the Indonesian version of CAMS-R is carried out by using psychometric analysis. The samples involved in the foregoing analysis are those of Indonesian Muslim mothers as the population. These samples represent young adult respondents (20-40 years old). This study is essential because the theoretical model of CAMS-R is constructed from comprehensive indicators which can help psychiatrists identify one's degree of mindfulness and provide well-oriented interventions for the one in need. The aforesaid indicators entail attention, present focus, awareness, and acceptance. The hypotheses of this study depict strong interconnections among these indicators, so that each of the indicators contributes to the strength of CAMS-R. In detail, the hypothetical patterns exhibit that attention is interconnected with present focus; attention is interconnected with awareness; attention is interconnected with acceptance; present focus is interconnected with awareness; present focus is interconnected with acceptance; and awareness is interconnected with acceptance.

METHODS

Stage 1 of the Study: Lingual and Cultural Adaptation of CAMS-R

Participants

The stage of lingual and cultural adaptation incorporated the participants consisting of two translators, three psychologists with doctoral academic qualifications, and one of them was a professor who had competencies related to measurement and mindfulness constructs. In addition, ten Muslim mothers were involved at the pre-trial stage to provide an assessment of the Indonesian version of CAMS-R concerning the comprehensibility of items and instructions contained in the CAMS-R Scale.

Instrument

The mindfulness measurement instrument adapted and validated in this study is Feldman's et al. (2007) cognitive attention mindfulness scale-revision (CAMS-R). CAMS-R consists of 4 aspects, and each aspect consists of 3 items, so there are totally 12 items. Participants were asked to provide an assessment of statements describing the state of mindfulness, on a scale of 1-5. In such a way, the high score depicts a person's high mindfulness state. CAMS-R was designed to measure mindfulness as a state covering 4 aspects of mindfulness, namely (1) awareness, associated with being aware of events and experiences, (2) attention, related to the focus on something, (3) present focus, associated with the focus on the current event or moment, and (4) acceptance, pertinent to accepting external events without giving judgments.

Procedure

The procedure of CAMS-R cross-cultural adaptation consisted of 5 stages, namely translation, synthesis, back translation, expert committee review, and pre-testing (Beaton et al., 2000). The stage of forward translation was to translate the original items of CAMS-R from English into Indonesian. The translation stage in this study was carried out by two separate translators. Both translators had competences in the field of English, with educational qualifications of bachelor's and master's degrees in English education. The synthesis stage was carried out by assessing the items of CAMS-R considered having high equivalence

related to concepts and language. The synthesis stage involved three experts in the field of the measured constructs, language, and culture in order to review the two translation versions of CAMS-R items produced by the two translators. Reviews were carried out with the aim of assessing the equivalence between contents, concepts, and linguistics aspects across all items of CAMS-R based on the translation results of two translators. The stage of back translation was to reverse the translation of CAMS-R draft from Indonesian to English. It was carried out by a professional translator with the academic qualification of Master in English. Furthermore, the expert committee stage referred to the process of adaptation, in which the results of back translation were compared with the original English items of CAMS-R. The purpose of this stage was to re-test the equivalence of meanings, by comparing the results of back translation with the original instrument and with re-translation results by experts in the field of language. Furthermore, the writing of Indonesian version items was modified to suit the Indonesian style. The final result of this stage was in the form of CAMS-R with Indonesian version. The last stage was the pre-testing stage or the so-called pre-try-out stage which aimed to verify the accuracy of translated items in terms of the clarity of test instructions, comprehensibility of items, and the ease of administering the test. The draft of CAMS-R instrument was given to ten readers. Anchored in the input provided by the try-out participants, reformulation of the existing instructions was done by means of changing the use of words in order to be better and more precise according to Indonesian language users. After improvements were made, the final form of CAMS-R with Indonesian version was ready for use. The results of pilot study demonstrated that the respondents had no difficulty understanding the CAMS-R items. The final draft of CAMS-R with Indonesian version was then laid out. Subsequently, field trials were carried out with a broader number of samples. The foregoing aimed to obtain empirical evidence of the psychometric properties of the Indonesian version of CAMS-R.

Stage 2 of the Study: Validation of the Indonesian Version of CAMS-R
Design and Participants

The validation of Indonesian version of CAMS-R adopted a psychometric analysis design by conducting a confirmatory factor analysis (CFA). This study involved 102 Muslim mothers as the participants. They aged between 20-40 years old, and their educational backgrounds ranged from high school to tertiary education. All participants also expressed their willingness to be the participants of this study as evidenced by filling out the statement letter of willingness to become research participants based on the informed consent principle. The foregoing aimed at providing protection regarding the confidentiality of participants' data (Nevid et al., 2005).

Data Analysis

The data were analyzed using CFA assisted by AMOS-20 software. The aim of analysis was to obtain the psychometric properties of CAMS-R by testing the validity evidence from the internal structure. In selecting items, the stages of analysis were split into 3 parts: initial item selection with the consideration of loading factor values; further item selection by considering the value of standardized residual covariance if the goodness of fit was not yet good; and final item selection with the consideration of getting a CFA model having a good fit of goodness. Testing the accuracy of measurement model hypothesized in this study deployed some parameters, namely: Goodness Fit Index (GFI), Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and Root Mean Square Error of Approximation (RMSEA) (Schumacker & Lomax, 2010). The value of loading factor assigned as the acceptable minimum value was .50 (Hair et al., 2019). Subsequently, the stage of determining validity and reliability was carried out at some steps. The convergent reliability of the selected items
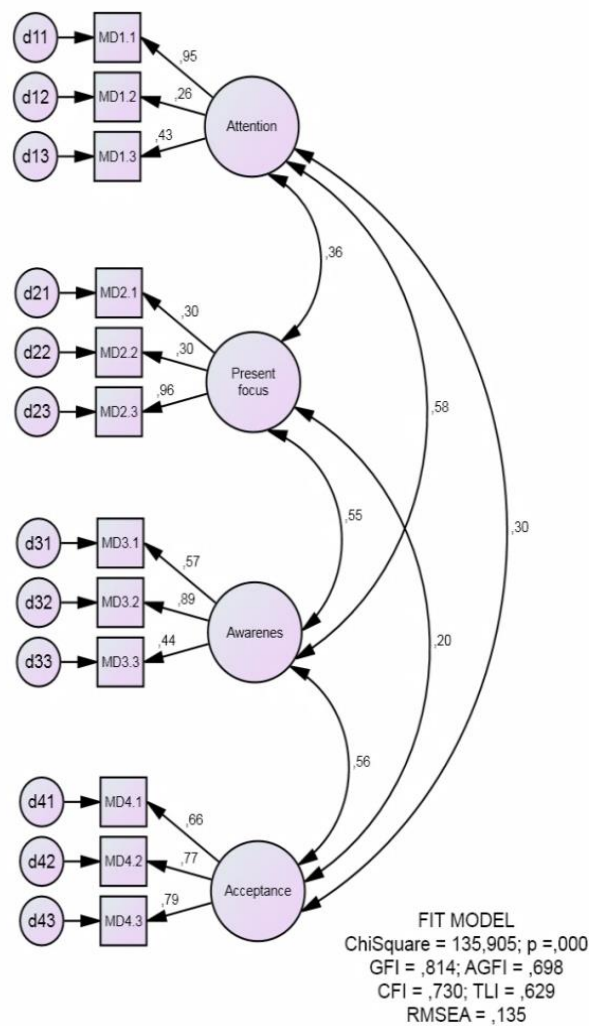
Figure 1. Initial CFA Model

was calculated based on the Cronbach Alpha coefficient, the composite reliability coefficient (CR), and the average variance extracted (AVE) value. The minimum acceptable values of CR and AVE as assigned in this study were .50 (Hair et al., 2016). The accuracy of each selected item was confirmed resting upon the calculation results of discriminant validity and cross-loading value.

RESULTS AND DISCUSSION
Results (Stage 1)

The first stage of this study focused on the translation of CAMS-R as a mindfulness measurement instrument from English adapted to Indonesian culture and language. Translation included forward translation, synthesis, back translation, expert reviews, and pilot studies (Beaton et al., 2000). The purpose of translation was to test the equivalence of concepts to words and phrases, not just literal or word-for-word translation. The initial translation in Indonesian became the subject matter for discussion, questions, and suggestions on certain word choices by the expert panels. They were an original translator and three psychologists who had expertise in the field of psychology. After the expert panels gave reviews, the final result was to agree with CAMS-R as the initial draft with Indonesian version.

The study results at the stage of translating CAMS into Indonesian version were as follows: (1) Mindfulness in the aspect of attention consisted of 3 items. The foregoing was
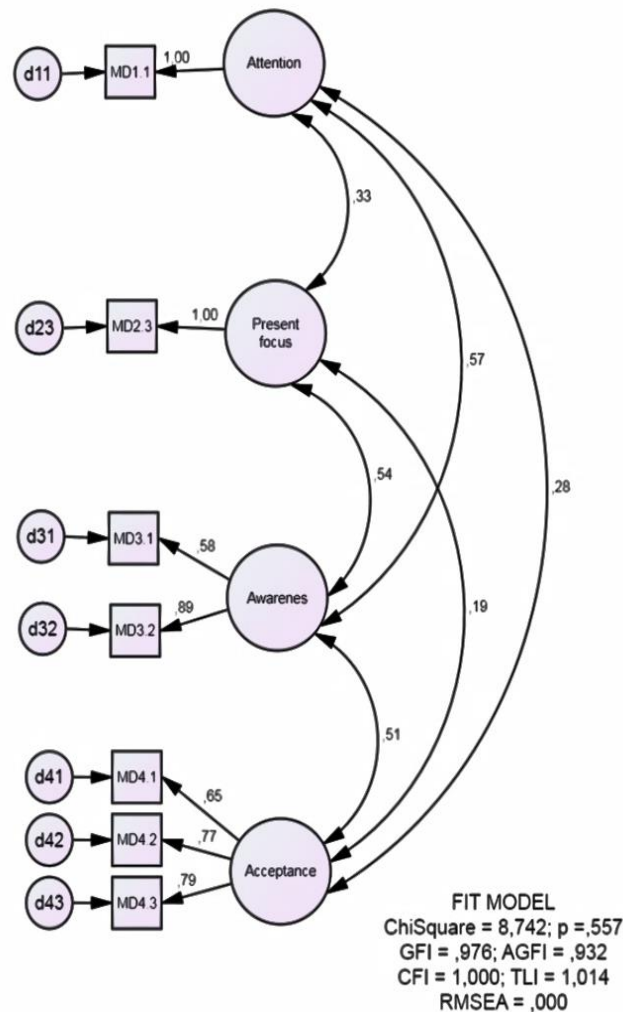
Figure 2. Test Results of the Initial Model (M-1)
CFA of the mindfulness construct

based on the results of expert panels' assessment indicating that mindfulness in the aspect of attention comprised 3 items and had high equivalence. A revision needed to be made by improving the sentence structure and more precise word choices without changing the meanings, especially the item "I am easily distracted", translated into "*saya mudah teralihkan perhatian atau saya mudah terganggu*". The two results of translation were synthesized into a sentence which was more appropriate to the context such as "*saya mudah teralihkan perhatian*". (2) Mindfulness in the aspect of present focus consisted of 3 items. The expert panels' assessment indicated that the translation products of those items were equivalent, but a small revision was necessary by improving the sentence structure and choosing more precise word choices without changing the meanings, especially in the statement "I am preoccupied by the future", which was translated into "*saya disibukkan dengan masa depan*". The words "preoccupied" and "*disibukkan*" were to some extent similar, but when linked to the psychological context, the word "preoccupied" was equivalent to the word "*terpaku*", therefore the word "*disibukkan*" was considered more appropriate than the word "*sibuk*" or "busy" in English. (3) Mindfulness in the aspect of awareness consisted of 3 items. The expert panels' assessment indicated that the translation result had a high equivalence, but a small revision was needed by improving the sentence structure and choosing more precise words without changing the meanings, especially in the statement "I try to notice my thought without judging them" which was translated into "*saya mencoba memperhatikan pikiran saya tanpa memberikan penilaian*". (4) Mindfulness in the aspect of acceptance consisted of 3

items. The expert panels' assessment indicated that the translation result had a high equivalence, but a small revision was still needed by improving the sentence structure and choosing more precise choices of words without changing the meanings, especially in the statement "I can tolerate emotional pain", which was translated into "*saya bisa mentoleransi secara emosional rasa sakit*". The foregoing was recommended by the expert panels.

The back translation stage of the initial draft of CAMS-R with Indonesian version was done by an independent translator, who did not know the original version of CAMS-R. The purpose of back translation was to emphasize conceptual and cultural equivalence. This process resulted in the initial version of CAMS-R after additional discussions with expert panels. The result of translation equivalence of CAMS-R with Indonesian version, which was re-translated into English, was further compared to the original version of CAMS-R. In such a way, the equivalence assessment showed that the translation result in general demonstrated high equivalence in terms of concepts and language. There were several things to note: (1) the aspect of present focus with the item that read "I am preoccupied by the future" was considered equivalent to "I am stuck-on the future", and they were still regarded as having the same meanings. (2) The aspect of awareness with the item that read "I try to notice my thoughts without judging them" was still considered equivalent to "I try to pay attention to my mind without being judgmental". (3) Mindfulness in the aspect of acceptance demonstrated that all items had similar meanings although there were slight differences in grammar and word choices of back translation results compared to those of the original items. An example of the translation of item number 3 which read "I can emotionally tolerate pains" was considered similar to "I can tolerate emotional pain".

Furthermore, to verify the accuracy of items that had been translated, the initial version of CAMS-R was administered to 10 Muslim mothers to test the clarity of test instructions, the comprehensibility of items, and ease of test administration. If there was still input given by the pre-trial participants and the instructions as well as all items could be understood, re-formulation of instructions was then undertaken, changing the use of words that were better and more precise according to Indonesian speakers. After modifications had been made, the final form of CAMS-R with Indonesian version was ready for use. After distributing it to the readers, the pilot study provided information that the respondents had no difficulty understanding CAMS-R items. Therefore, it was necessary to conduct field trials for the final draft of CAMS-R Indonesian version by involving a greater number of participants to test the psychometric properties of the CAMS-R.

Results (Stage 2)

The purpose of the second stage of the present study was to test the Indonesian version of CAMS-R measurement model and to validate the CAMS-R. The steps taken were (a) selecting items, (b) pursuing the validity and reliability of CAMS-R.

The mindfulness construct was divided into 4 aspects, namely: attention, present focus, awareness, and acceptance. The total number of items was 12. Figure 1 displays the result of initial CFA model, namely item selection based on loading factors. Initial CFA results showed that the aspects of attention and present focus only left 1 item, while the rest of the items had loading factors of less than .5. The foregoing meant 1 item for attention and 1 item for present focus. In the aspect of awareness, there was 1 item which was eliminated, while all items of the acceptance aspect were used. Grounded in the initial CFA analysis, the mindfulness construct consisted of 12 items, wherein 5 items were eliminated, and the residue was 7 items.

In the Initial CFA Model (M-1), it was proven that the measurement model of the mindfulness construct did not yet have a suitable model, as indicated by the following parameters: Chi Square =135.905; p = .000; GFI = .814; AGFI = .698; and RMSEA = .135.

Table 1. Results of Item Selection of Mindfulness Construct

Mindfulness Aspects	Statements	Loading Factor	
		M-1	M-2
Attention	*Hal yang mudah bagi saya untuk berkonsentrasi pada apa yang saya sedang saya lakukan* (It is easy for me to concentrate on what I am doing)	.95	1.00
	Saya mudah terganggu (I am easily distracted)	.26	-
	Saya dapat memperhatikan satu hal dalam jangka waktu yang lama (I am able to pay close attention to one thing for a long period of time)	.43	-
Present Focus	*Saya disibukkan oleh masa depan* (I am preoccupied by the future)	.30	-
	Saya terpaku memikirkan masa lalu (I am preoccupied by the pasts)	.30	-
	Saya bisa memusatkan perhatian pada kejadian-kejadian saat ini (I am able to focus on the the present moment)	.96	1.00
Awareness	*Saya biasanya bisa menggambarkan bagaimana perasaan (saya) saat ini secara rinci* (I can usually describe how I fell at the moment its considerable detail)	.57	.58
	Mudah bagi saya untuk tetap pada pikiran dan perasaan saya (It is easy for me to keep track of my thought and feeling)	.89	.89
	Saya berusaha memperhatikan pikiran saya tanpa memberikan penilaian (I try to notice my thought without judging them)	.44	-
Acceptance	*Saya mampu mentoleransi secara emosional rasa sakit* (I can tolerate emotional pain)	.66	.65
	Saya dapat menerima hal-hal yang tidak bisa saya ubah (I can accept things I cannot change)	.77	.77
	Saya mampu untuk menerima pikiran dan perasaan (saya) (I am able to accept the thought and feelings)	.79	.79

Furthermore, the final model (M-2) was tested. As shown in Figure 2, the loading factors of all items were more than .5. The results of model fit evaluation fell into: chi square of 8.742 (p = .557), Goodness of Fit Index (GFI) of .976, Adjusted GFI or AGFI of .932, CFI of 1.000, Tucker-Lewis Index (TLI) of 1.014, and Root Mean Square Error of Approximation (RMSEA) of .000, all parameters demonstrated the existence of a good fit of goodness. The results of item selection (M-1) and (M-2) are displayed in table 1.

The table 2 displays the results of construct validity calculations based on several convergent validity calculations such as loading factor, composite reliability (CR), and average variance extracted (AVE).

As shown in Table 2, the loading factor had values in the range of .585-.887. The values met a good requirement because they were more than .5. Especially in the aspects of attention and present focus, there was 1 item left for each item, so the loading factor was 1. The values of composite reliability (CR) were in the range of .713-.785, and they were more than .7. The values of AVE were in the range of .736-.739, and they were more than .50, which explained the existence of a good indication of convergent validity. The calculation results for all selected items in the mindfulness construct also had good convergent validity. The discriminant validity of an aspect was pursued by comparing the AVE root value with all correlation coefficients between this aspect and other aspects. As the foregoing, if the root value of AVE is greater than the correlation coefficient, this aspect is considered to have good discriminant validity. As displayed in table 3, all aspects of mindfulness construct had good discriminant validity.

Discussion

The Indonesian version of CAMS-R, validated to test the psychometric properties of the measuring instrument, was conducted on 103 participants of Muslim mothers at the ages of 20-40 years old, with educational backgrounds of high school and tertiary education. CAMS-R consisted of 4 aspects, and each aspect consisted of 3 items, so there were totally 12 items. After the CFA analysis was carried out, it left 7 items, with high loading factors exceeding .05. Based on the confirmatory test using CFA analysis, it was evidenced that the CAMS-R measurement model had compatibility with empirical data. The foregoing was indicated by the results of the evaluation of the model's suitability with chi square of 8.742 (p = .557), GFI of .976, AGFI of .932, CFI of 1.000, TLI of 1.014, and RMSEA of .00. The results of this analysis explain that the measurement model shows a good fit of goodness (Schumacker & Lomax, 2010).

As a whole, the CAMS-R measurement model had empirical compatibility or had been confirmed by empirical data. The Indonesian version of CAMS-R had an internal structure like the original CAMS-R, which possessed 7 items. Apart from that, it also had psychometric properties, as a whole, shown by Composite Reliability (CR) of .936, and a Cronbach Alpha of .772. Those values were categorized as high.

The CFA analysis showed that all aspects of CAMS-R were represented by a good quality of items with high loading factors. In so doing, as an implication of this finding, the Indonesian version of CAMS-R can be used as a measure of mindfulness for adult samples in the context of Muslim mothers at the ages of 25-40 years old. The Indonesian version of CAMS-R had a high composite reliability (CR) and Cronbach alpha, compared to the original CAMS-R (Feldman et al., 2007) and compared to other language versions of CAMS-R. CAMS-R has been adapted and validated by using various language versions. The results of this study are still in line with other studies that have adapted and validated CAMS-R with different languages such as Turkish version of CAMS-R (Catak, 2012), Chinese version (Chan et al., 2015), Italian version (Veneziani & Voci, 2015), and Portuguese version (Teixeira et al., 2017).

Compared with the original CAMS-R (Feldman et al., 2007), this study proved that the mindfulness measurement tool had evidence of a good internal structure in a way that mindfulness was built on 4 dimensions, namely: present focus, attention, acceptance, and awareness. CAMS-R consisted of 12 items, spread over 4 dimensions of mindfulness. After

Table 2. Validity and Reliability of Mindfulness Construct

Aspects of Mindfulness	Selected Items	Loading Factor	α	CR	AVE
Attention	MD11	1.000	1.000	1.000	1.000
Present Focus	MD23	1.000	1.000	1.000	1.000
Awareness	MD31	.585	.683	.713	.736
	MD32	.887			
Acceptance	MD41	.653	.777	.785	.739
	MD42	.772			
	MD43	.793			
Total			.772	.936	.813

CR = Composite Reliability, AVE = Average Varian Extracted

Table 3. Discriminant Validity of Mindfulness Construct

Aspects of Mindfulness	Square Roots of AVE	Attention	Percentage of Focus	Awareness	Acceptance
Attention	1.000	1.000	-	-	-
Present Focus	1.000	.328	1.000	-	-
Awareness	.858	.567	.538	1.000	-
Acceptance	.860	.280	.194	.514	1.000

the factor analysis was carried out, it was proven that there were 7 items left with high loading factors. Based on the original version of the CAMS-R, the aspect of present focus which read, "I am preoccupied by the future" and "I am preoccupied by the past", had a correlation with the concept of rumination, but not with the concept of mindfulness. This means that the two items do not measure the mindfulness construct of the present focus dimension (Feldman et al., 2007). Therefore, the two items adapted in the Turkish version are not included, so there are only 10 items left (Catak, 2012). This study strengthens the evidence that CAMS-R has an internal structure and is empirically confirmed, but for the mindfulness aspect of the present focus, there is only 1 item with a high loading factor, while 2 other items, namely: "I am preoccupied by the future" and "I am preoccupied by the past" has low loading factors of .3. This means, the results of this study support previous research, meaning that these items do not measure the main mindfulness construct in the aspect of the present focus. Thus, it is more advisable to use 10 items (Feldman et al., 2007).

Implication

The Indonesian version of CAMS-R had internal consistencies with a Cronbach Alpha of .77 and a composite reliability of .939, indicating high internal consistencies. Because the Indonesian version of CAMS-R has a psychometric quality indicated by having high construct validity and high composite reliability, and although this has not been strengthened by evidence from external sources such as by comparing the Indonesian version of the CAMS-R measuring instrument with a parallel mindfulness measurement tool, the present study implies that the Indonesian version of CAMS-R with 7 items, in many ways, can be used to measure mindfulness especially for respondents of young Muslim mothers (aged 20-40 years old).

Limitation and Future Direction

The current study is not free from limitation. This study has not been strengthened by evidence from external sources such as by comparing the Indonesian version of the CAMS-R measuring instrument with a parallel mindfulness measurement tool. It is recommended that further studies be conducted to improve CAMS-R adaptation and validation by involving a broader number of samples. Also, further studies can perfect the validity of CAMS-R in terms of not only construct validity but also in a way that seeks evidence from external sources to pursue validity. The foregoing can be done by comparing the Indonesian Version of CAMS-R with mindfulness measurement instruments, such as: The Toronto mindfulness scale (TMS) (Lau et al., 2006), the mindful attention awareness scale (MAAS) (Brown & Ryan, 2003), and the five facets mindfulness questionnaire (FFMQ) (Baer et al., 2006). In addition, the Indonesian version of CAMS-R can be tested on its predictive validity by correlating it with other variables such as anxiety, depression, subjective well-being, and psychological well-being in the adult samples.

CONCLUSIONS

After the Indonesian language adaptation of CAMS-R has been carried out and tested using confirmatory factor analysis (CFA), the results of item selection with high loading factors leave 7 items with good quality. The CAMS-R measurement model has been confirmed to have a fit model according to empirical data, therefore the Indonesian version of CAMS-R can be used as a valid and reliable measuring instrument, and it is acceptable to be used as a measure of mindfulness for Indonesian Muslim mothers or young adult respondents (25-40 years old) from Indonesian population.

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AUTHOR CONTRIBUTION STATEMENT

Sutarto conducted deep literature review on cognitive and affective mindfulness scale, designing the research method, establishing collaborative works with lecturers, psychologists, and translators that helped the process of lingua-cultural adaptation, conducted data analysis, editing the whole work, and mostly took responsibility for the research funding. Idi Warsah wrote the research introduction, gathered the data, worked on several details of the research method, and wrote on data discussion and conclusion. Khusnul Khotimah worked on literature review and helped write data discussion. Endang Prastuti validated the translated CAMS-R model and worked on statistical analysis Ruly Morganna helped write the content of data discussion and proofread the paper.

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