Psychometric Properties of Scales for Assessing Experiential Avoidance

Thanayot Sumalrot, Ph.D.*, Naphol Phannajit, M.Sc., Sucheera Phattharayuttawat, Ph.D.***

**Department of Psychiatry, Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok, Thailand, **Saint Andrews International School Bangkok, Thailand.*

ABSTRACT

Objective: To study and compare the psychometric properties, reliability, and validity of the Acceptance and Action Questionnaire (AAQ-II) and the Multidimensional Experiential Avoidance Questionnaire (MEAQ), which were translated into Thai.

Materials and Methods: This study used the AAQ-II and MEAQ, which were back translated into Thai. The Depression Anxiety Stress Scale 21 (DASS-21) and Satisfaction with Life Scale (SWLS) were used in conjunction to collect data from 35 graduate students (females 77.1%) and 462 people from the general population of Bangkok (females 74.2%).

Result: Item Objective Congruence (IOC) of AAQ-II and MEAQ was 0.79 and 0.87, respectively. Both had high correlation coefficients with DASS-21 and SWLS, indicating criteria-related validity. Moreover, Confirmatory Factor Analysis (CFA) was also carried out. The correlation coefficient to the original was high (0.96 for AAQ-II and MEAQ, and subscales ranging from 0.83-0.94). They also had high internal consistency, with Cronbach's alpha being 0.89 in AAQ-II and 0.92 in MEAQ, with high construct reliability (0.88 and 0.79-0.86).

Conclusion: The translated versions of AAQ-II and MEAQ have good psychometric properties. When comparing AAQ-II with MEAQ, it was noted that the correlation between AAQ and other scales was higher than MEAQ, which only had a moderate correlation. AAQ-II also tends to have a high association with distress variables. However, it is still possible to assess experiential avoidance. Thus, the use of each questionnaire will be depended on certain objectives.

Keywords: Acceptance and Action Questionnaire – II (AAQ-II); Multidimensional Experiential Avoidance Questionnaire (MEAQ); Psychometric Properties (Siriraj Med J 2022; 74: 760-768)

INTRODUCTION

Nowadays, it is suggested that psychological problems emerge from a desire to avoid, suppress, or control an undesirable situation rather than mere thought and emotion. This desire increases the intensity of, psychological disorders and symptoms. Experiential avoidance, introduced by Steven C. Hayes, is a response by individuals to avoid undesirable events and involves attempts to evade, alter, or control experiences despite it being a part of their values or goals.[1-4] Hayes[3] defined the causes of experiential avoidance as: 1) Bidirectional nature of human language which links undesirable events and certain uses of language, possibly leading to people re-experiencing certain events and thus a desire to avoid it; 2) Inappropriate generalization of human language, which makes an individual use an ineffective coping mechanism prepared beforehand to avoid certain events; 3) Social encouragement and modeling which promotes individuals to imitate the use of experiential avoidance; and 4) Cultural support for emotions and cognitions

Corresponding author: Thanayot Sumalrot
E-mail: thanayot.sum@mahidol.edu
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ORCID ID:http://orcid.org/0000-0001-7506-4429
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in which an individual is shaped by the socio-cultural environment and perceives certain emotions and thoughts as improper and thus chooses to avoid them. All these causes lead to an inflexible coping mechanism and inability to separate one's sense of self and behavior which can have a negative impact such as the use of alcohol, drugs, or a relapse[5-7] and psychological distress.[4,8,9] It also prevents opportunities to experience valuable events. In summary, experiential avoidance is caused by human language proficiency and human nature which leads to a certain state of psychopathology.

As a response to experiential avoidance, Acceptance and Commitment Therapy (ACT) was developed under the rationale of Relational Frame Theory (RFT)[10], which focuses on language proficiency as the root cause of a person's psychological inflexibility. In ACT, the main purpose is to promote psychological flexibility and enable individuals to interact effectively in the present moment. This therapy features several questionnaires to assess the level of experiential avoidance. The most accepted and widely used questionnaire is known as the Acceptance and Action Questionnaire (AAQ). However, due to problems associated with its psychometric properties, a new version was developed, known as the Acceptance and Action Questionnaire – II (AAQ – II) to assess experiential avoidance and psychological inflexibility.[11] Concurrently, the Multidimensional Experiential Avoidance Questionnaire (MEAQ) was developed to cover elements of experiential avoidance in broader terms. However, there is still disagreement over the differences of MEAQ and AAQ – II, and on the latter's focus, which assesses the construct and is associated with neuroticism and negative affectivity rather than experiential avoidance.[12]

Experiential avoidance can be found in any population, so it is important to not only be aware, but be careful in its application. Until now, there are some studies related to Experiential Avoidance such as Thai version of the Philadelphia Mindfulness Scale (PHLMS)[13] but there has not been a study exploring experiential avoidance in the Thai population, including the psychometric property of AAQ and MEAQ due to a lack of translated questionnaires. Hence, this research translated the AAQ –II and MEAQ into Thai to study and compare their psychometric properties. This study used a sample of Bangkok residents in early adulthood (aged 18-40) as they are most likely to experience stress from inappropriate use of experiential avoidance. Thus, studying experiential avoidance as well as translating the questionnaires would lead to a better understanding in the context of the Thai population and help further develop relevant research and therapies in Thailand.

MATERIALS AND METHODS

Sample

Sample group 1 or the bilingual group consisted of 35 participants proficient in both Thai and English from Faculty of Medicine Siriraj Hospital, (77.1% females) aged between 22 and 29 s (M = 24.71, SD = 1.61), and with an English proficiency score (MU GRAD TEST) between 60 and 88 (M = 68.94, SD = 7.21). Sample group 2 was calculated using the W.G. Cochran formula, with a confidence interval of 95% and acceptable deviation of 5%. The sample had 462 participants (74.2% females), aged 18 to 40 years (M = 24.65, SD = 5.65). All of them resided in Bangkok.

Instruments

Acceptance and Action Questionnaire – II (AAQ-II)[11]

The AAQ-II is a 7-item, 7-point Likert-type scale (7 = always, 1 = never true). It measures experiential avoidance and psychological inflexibility. The original version by Bond, Hayes[11] showed good psychometric properties (mean alpha of 0.84, 3 and 12 month test-retest reliability of 0.81 and 0.79) and one-factor structure.

Multidimensional Experiential Avoidance Questionnaire (MEAQ)[12]

The MEAQ is a 62-item, 6-point Likert-type scale (6 = strongly agree, 1 = strongly disagree) which measures multidimensional experiential avoidance (behavioral avoidance, distress aversion, procrastination, distraction/suppression, repression/denial, and distress endurance). The original version by Gamez, Chmielewski[12] showed good psychometric properties (mean alpha of 0.85).

Depression Anxiety Stress Scale 21 (DASS-21)[14]

The DASS-21 is a 21-item, 4-point Likert-type scale. It contains three subscales (depression, anxiety, and stress). The Thai version by Oei, Sawang[14] showed good psychometric properties (alpha value of depression was 0.86, anxiety was 0.81, and stress 0.70) Medium to strong positive correlations were expected between the AAQ-II and DASS-21 subscales.

Satisfaction with Life Scale (SWLS)[15]

The SWLS is a 5-item, 4-point Likert-type scale. It measures global cognitive judgment of satisfaction with one's life. The original version showed good psychometric properties (coefficient alpha was 0.87, test-retest reliability was 0.82).

Design

The study procedure was approved by the Institutional

Review Board of the Faculty of Medicine Siriraj Hospital. (Si. 666/2018) Following a suggestion by Nantaga Sawasdipanich and Sujitra Tiansawad[16], the researcher chose to first translate the questionnaires into Thai and then consult with a professional translation consultant. Then, the researcher chose to back translate as suggested by the language expert. Next, the language expert and a psychology expert compared the original questionnaire to the backward translated version for revisions. Afterwards, the content was examined by three psychology experts and an Item-Objective Congruence (IOC) was obtained for every item in the questionnaire. An IOC of more than 0.5 was considered as valid.[17] The researcher improved the language as suggested by the expert to make the questionnaire more complete. As a result, two sets of questionnaires, or the Acceptance and Action Questionnaire–II: Thai version (AAQ-II), and Multidimensional Experiential Avoidance Questionnaire: Thai version (MEAQ) were delivered.

In sample group 1, the administration of the questionnaire was collective and conducted with a consent form distributed with a brief about the aim of the study, followed by an assignment to respond to AAQ-II, MEAQ, AAQ-II Thai version, MEAQ Thai version.

In sample group 2, the administration of the questionnaire was collective and conducted online with detailed information and consent provided and explained, followed by a task to respond to the AAQ-II Thai version, MEAQ Thai version, DASS-21, SWLS.

Data analysis

The first task was to use the score to examine content validity using Item-Objective Congruence (IOC). All statistical analyses were conducted using PASW Statistics (v. 18.0; SPSS Inc., Chicago, IL, USA).

Data from sample group 1 was examined using parallel form reliability analysis. Data from sample group 2 was examined using the corrected item-total correlation (CITC), reliability: internal consistency, validity: criterion-related validity, and construct validity. Validity and, construct validity

RESULTS

The response rate or questionnaires returned from graduate students was 35 or 100% of all samples. Meanwhile, the response rate or ordinary people who answered and returned the questionnaires was 462, which also accounted for 100% of samples. The sample size had a ratio of 25.8% males and 74.2% females. The sample age range was between 18 and 40 years (M = 24.56, SD = 5.65).

Reliability

Table 1 shows the mean and standard deviation of both AAQ-II and MEAQ in the Thai version and original questionnaire, which were noted to be similar. Moreover, the results indicate high parallel form reliability of the Thai AAQ-II and MEAQ questionnaires, so they can be used in Thai context as well.

Table 2 shows the Cronbach's alpha coefficient for the total AAQ-II, and MEAQ scores, behavioural avoidance, distress aversion, procrastination, distraction and suppression, repression and denial, and distress endurance. Moreover, most items in both questionnaires had a CITC above 0.2[18], except some items in MEAQ which will be explained in detail in the discussion section. This indicates that those with a high score in these items also have a high total score and vice versa. These finding indicate high internal consistency of both questionnaires, and the degree of interrelationship among items on the scale along with their consistency and ability to measure the same thing.

Validity

The results of IOC from three psychology experts verified content validity, which means the IOC of the Thai version of the AAQ-II and MEAQ were 0.79 and 0.87, respectively. The finding indicates content validity of both questionnaires was acceptable and capable of assessing the objectives of the questionnaires.

Table 3 shows the correlation between the Thai version of AAQ-II, MEAQ and DASS-21 and SWLS. According to the results, AAQ-II's score correlates with depression, anxiety, stress, and satisfaction with life score.

Moreover, the correlation coefficient between MEAQ, together with its sub-scale, and DASS-21 (depression, anxiety and stress) and SWLS significantly correlated with depression, anxiety, stress, and satisfaction with life score. Besides distraction and suppression, which only correlated with stress and distress endurance correlated with depression, anxiety, and satisfaction with life score, but not the stress scale.

Confirmatory Factor Analysis (CFA) was conducted to examine the construct validity of 462 samples. In Table 4, the results of confirmatory factor analysis found that the hypothesized measurement model of the Thai version of AAQ-II and MEAQ did not fit well with the empirical data. For the models to relate, the researcher modified them by deleting each item which had a factor load below 0.4 and/or high measurement error. The result was that the modified AAQ-II (6 items), and MEAQ (39 items) obtained construct validity with admissible fit indices.

TABLE 1. Parallel form reliability of AAQ-II and MEAQ (both English and Thai versions). Data was analyzed from sample group 1 (n = 35).

Scale	ENG M (SD)	THAI M (SD)	Correlation
AAQ-II	22.34 (8.55)	23.88 (8.77)	.963**
MEAQ	191.57 (37.05)	189.14 (38.67)	.940**
BA	36.91 (9.43)	36.68 (9.41)	.872**
DA	43.02 (11.88)	41.71 (11.85)	.925**
P	24.74 (5.71)	24.77 (5.58)	.832**
DS	24.91 (7.15)	24.91 (8.34)	.863**
RD	32.8 (9.19)	32.14 (8.53)	.935**
DE	47.82 (8.39)	48.08 (8.7)	.882**

Abbreviations: AAQ-II; Acceptance and Action Questionnaire – II, MEAQ; Multidimensional Experiential Avoidance Questionnaire, BA; Behavioral Avoidance, DA; Distress Aversion, P; Procrastination, DS; Distraction & Suppression, RD; Repression & Denial, DE, Distress Endurance, * $p < .05$, ** $p < .01$.

TABLE 2. Reliability and Corrected Item-Total Correlation of the AAQ-II and MEAQ translated into Thai. Data was analyzed from sample group 2 (n = 462).

Scale	Item (N)	Cronbach's Alpha	Corrected Item-Total Correlation
AAQ-II	7	.892	.610 - .756
MEAQ	62	.921	
BA	11	.832	.316 - .658
DA	13	.828	.228 - .636
P	7	.795	.261 - .623
DS	7	.825	.491 - .638
RD	13	.847	.169 - .686
DE	11	.817	.269 - .651

Abbreviations: AAQ-II; Acceptance and Action Questionnaire – II, MEAQ; Multidimensional Experiential Avoidance Questionnaire, BA; Behavioral Avoidance, DA; Distress Aversion, P; Procrastination, DS; Distraction & Suppression, RD; Repression & Denial, DE; Distress Endurance, SWLS; Satisfaction with life Scale, * $p < .05$, ** $p < .01$.

Table 5 shows both questionnaires before model modification. Each item on the AAQ-II Thai Version had a standardized factor load between 0.65-0.82. After modification, the factor load rose from 0.70 to 0.79. For items in each domain of the Thai version of MEAQ, the standardized factor load before model modification ranged between 0.20-0.77. After modification, each domain's factor loads increased.

When considering the squared multiple correlation (R^2) of items or reliability of indicators for the Thai version of AAQ-II, the score ranged between 0.42-0.67. When the model was modified, the score was still similar. For the

TABLE 3. Criterion-Related Validity of the AAQ-II and MEAQ. Data was analyzed from sample group 2 (n = 462).

Scale	M (SD)	D	A	S	SWLS
AAQ-II	25.72 (9.62)	.70**	.62**	.69**	-.49**
MEAQ	216.4 (34.66)	.54**	.46**	.47**	-.27**
BA	41.64 (8.9)	.37**	.35**	.35**	-.14**
DA	51.32 (10.95)	.35**	.29**	.31**	-.20**
P	24.05 (6.84)	.52**	.39**	.42**	-.29**
DS	51.32 (10.95)	.07	.09	.10*	-.02
RD	40.41 (11.27)	.52**	.48**	.50**	-.18**
DE	46.83 (7.96)	-.19**	-.10*	-.08	.20**

Abbreviations: AAQ-II; Acceptance and Action Questionnaire – II, MEAQ; Multidimensional Experiential Avoidance Questionnaire, BA; Behavioral Avoidance, DA; Distress Aversion, P; Procrastination, DS; Distraction & Suppression, RD; Repression & Denial, DE; Distress Endurance, D; Depress from Depression Anxiety Stress Scale 21, A; Anxiety from Depression Anxiety Stress Scale 21, S; Stress from Depression Anxiety Stress Scale 21, SWLS; Satisfaction with life Scale, * $p < .05$, ** $p < .01$.

TABLE 4. Fit indices from of Confirmatory Factor Analysis of the Thai version of the Acceptance and Action Questionnaire - II and Thai version of the Multidimensional Experiential Avoidance Questionnaire.

	AAQ-II		MEAQ	
Fit indices	**Original**	**Modified**	**Original**	**Modified**
χ^2	99.69	20.77	6892.65	2194.83
Df	14	8	1814	687
P-Value	0.000	0.007	0.000	0.000
Relative χ^2	7.12	2.596	3.799	3.194
NNFI	.95	.99	.91	.94
SRMR	.04	.021	.099	.076
RMSEA	.13	.059	.078	.069
CFI	.97	.99	.91	.94

Abbreviations: χ^2; Chi-square, df; degree of freedom, RMSEA; Root Mean Square Error of Approximation, CFI; Comparative Fit Index, SRMR; Standardized Root Mean Square Residual, NNFI; Non-Normed Fit Index

Thai version of the MEAQ, the R^2 ranged between 0.06-0.57 before modification. Afterwards, the R^2 increased as follows: 1) behavioral avoidance (0.23-0.73); 2) distress aversion (0.25-0.48); 3) procrastination (0.33-0.53); 4) distraction and suppression (0.27-0.55); 5) repression and denial (0.27-0.59); and 6) distress endurance (0.28-0.57).

The construct reliability (CR) of the Thai version of AAQ-II before modification was 0.892. After modification, it was similar or 0.883. For the Thai version of MEAQ, the CR before modification was between 0.797-0.853, and was similar after or in the range of 0.792-0.862. Each domain was scored as follows: 1) behavioral avoidance (0.818); 2) distress aversion (0.802); 3) procrastination (0.810);

TABLE 5. Factor loading, Squared multiple correlation, Construct Reliability, Average Variance Extracted of the Thai version of the Acceptance and Action Questionnaire - II and Thai version of the Multidimensional Experiential Avoidance Questionnaire.

	Factor loading		R^2		CR		AVE	
	Original	Modified	Original	Modified	Original	Modified	Original	Modified
AAQ-II	.65-.82	.70-.79	.42-.67	.49-.62	.892	.883	.543	.557
MEAQ								
BA	.33-.72	.53-.73	.11-.52	.28-.53	.840	.818	.330	.393
DA	.25.70	.50-.69	.06-.48	.25-.48	.831	.802	.287	.406
P	.29-.72	.58-.73	.08-.52	.33-.53	.797	.810	.370	.416
DS	.52-.74	.52-.74	.27-.54	.27-.55	.827	.827	.409	.409
RD	.20-.77	.52-.77	.06-.56	.27-.59	.853	.862	.332	.456
DE	.33-.75	.53-.76	.13-.57	.28-.58	.820	.792	.303	.393

Abbreviations: R^2; Squared multiple correlation, CR; Construct Reliability, AVE; Average Variance Extracted, AAQ-II; Acceptance and Action Questionnaire – II, MEAQ; Multidimensional Experiential Avoidance Questionnaire, BA; Behavioral Avoidance, DA; Distress Aversion, P; Procrastination, DS; Distraction & Suppression, RD; Repression & Denial, DE; Distress Endurance, * $p < .05$, ** $p < .01$

4) distraction and suppression (0.827); 5) repression and denial (0.862); and 6) distress endurance (0.792). Meanwhile, the average variance extracted (AVE) of the Thai version of AAQ-II before modification was 0.543. After modification, it increased to 0.557. For the Thai version of MEAQ, AVE ranged between 0.287-0.370 before modification. Afterwards, it increased to 0.393-0.456 and the results of each domain are as follows: 1) behavioral avoidance (0.393); 2) distress aversion (0.406); 3) procrastination (0.416); 4) distraction and suppression (0.409); 5) repression and denial (0.456); and 6) distress endurance (0.393).

DISCUSSION

The reliability of backward translated questionnaires was equivalent to the original versions as both had statistically significant high correlation coefficients. This indicates that scores measured by the original and the backward translated version are related and consistent. In addition, by using Internal Consistency Reliability analysis, the researcher noted high internal consistency in which the alpha value of AAQ-II was 0.89 and 0.92 for MEAQ. These values are similar to the original version, in which alpha of AAQ-II and MEAQ were 0.84 and 0.85, respectively. The alpha values of other translated of other translated questionnaires or the Spanish version[19] were 0.75, and 0.93, respectively. When compared to total CITC scores, it was found that most items had a score of greater than 0.2[18], except item 23 – 'I'm in touch with my emotions'. MEAQ, which is a reversed item, had a score of 0.169. This may have been caused by a misunderstanding among participants when responding to questionnaires which had a mix of both negative and positive items. However, the reliability of translated questionnaires is consistent and equivalent to the original.

Moreover, carrying out confirmatory factor analysis after modifying the model, the squared multiple correlation (R^2), which signifies reliability of indicators or items in the AAQ-II, ranged between 0.49-0.62. Meanwhile, each item in the Thai version of MEAQ obtained R^2 in the following range: 1) behavioral avoidance (0.23-0.73); 2) distress aversion (0.25-0.48); 3) procrastination (0.33-0.53); 4) distraction and suppression (0.27-0.55); 5) repression and denial (0.27-0.59); and 6) distress endurance (0.28-0.57). After considering construct reliability (CR) to measure latent variables, it was found that after modification, the Thai version of AAQ-II was 0.883 and between 0.792-0.862 for MEAQ. The domain in each was as follows: 1) behavioral avoidance (0.818); 2) distress aversion (0.802); 3) procrastination (0.810); 4) distraction and suppression = (0.827); 5) repression and denial = (0.862); and 6) distress endurance = (0.792). For

average variance extracted (AVE) after modification, the score for the Thai version of AAQ-II: Thai Version was .557 and of between 0.393-0.456 for MEAQ. In each, the domain was as follows: 1) behavioral avoidance (0.393); 2) distress aversion = (0.406); 3) procrastination (0.416); 4) distraction and suppression (0.409); 5) repression and denial (0.456); and 6) distress endurance (0.393). Ultimately, the criteria suggests that both CR and AVE were above 0.5.[20] All domains of the Thai MEAQ had AVE below 0.5, but since *Fornell* and *Larcker* stated that if AVE is less than 0.5, but the construct reliability is higher than 0.6, we can accept convergent validity of the construct as still adequate.[21] Hence, this indicated that both the Thai version of AAQ-II and MEAQ had a good level of reliability in terms of questionnaire and in respect to each domain, including the reliability of in measuring latent variables of each construct.

Regarding validity, it was found that both questionnaires had good content validity. Each item complied with factors under consideration of the expert. In examining the relationship of scores measured using AAQ-II and MEAQ, and from DASS-21 and SWLS, statistical significance of both questionnaires' ability to measure depression, anxiety, stress, and life satisfaction scores was observed. Still, while considering each element of the MEAQ, the researcher found that subscale distraction and suppression were not related to depression, anxiety, and life satisfaction but distress. While there is no relationship between the Distress Endurance Subscale and stress, there is a negative relationship with depression and anxiety and a positive relationship with life satisfaction. This correlates with the original study.[12] Ultimately, this indicates that if an individual intentionally uses distraction and suppression to ignore certain events, it may make that individual stressed, but it does not affect depression, anxiety, or satisfaction of life. An individual with distress endurance means he/she encounters distress, but solves the problem without fear. This might result in a decrease in the individual's depression and anxiety and increases life satisfaction.

A confirmatory factor analysis examining the factors found that the hypothesized measurement model of the Thai AAQ-II and MEAQ did not fit well with empirical data. For the models to relate more, the researcher modified them based on the modification index, factor loading value, squared multiple correlations (R^2), and measurement error. Other factors considered were based on theory and an item's suitability.[22] The result was that the modified Thai AAQ-II and MEAQ obtained construct validity with admissible fit indices that decreased the Thai AAQ-II to six items, with a factor load between 0.70-0.79. For the Thai version of MEAQ, although there were still six component aspects, the number of items decreased to 39 with factor loading ranging from 0.5-0.89, including: 1) behavioral avoidance (0.53-0.73); 2) distress aversion (0.50-0.69); 3) procrastination (0.58-0.73); 4) distraction and suppression (0.52-0.74); 5) repression and denial (0.52-0.77); and 6) distress endurance (0.53-0.76). All had a statistical significance of .05. The result from confirmatory factor analyses of these research sample groups validated both questionnaires' ability to 'EA'. The Thai version of the AAQ-II had good constructs to measure. Also, it was a one-factor model as its first item was eliminated due to excessive difficulty of comprehension. However, the second and third items were allowed as their deviations correlated with one another. Thus, when using the Thai version of AAQ-II, one must be cautious and consider the first item. Meanwhile, the Thai version of the MEAQ had admissible levels of construct to measure before modification. Still, after modification and elimination of some items, which had factor load below 0.4[22] and/or low R^2, there was relatively high measurement error (the eliminated items were 1, 2, 4, 6, 7, 8, 13, 16, 18, 19, 21, 23, 24, 26, 30, 31, 34, 39, 46, 48, 53, 54, 62). This made the model more consistent with empirical data and thus confirmed that the Thai version of MEAQ was a six-factor model which correlated with the study by Gamez, Chmielewski[12] and Rochefort, Baldwin.[23] However, by eliminating 23 items, when using the MEAQ, one must be careful and modify the quality of these items for the Thai version.

In summary, the validity of both questionnaires is appropriate in terms of f content, criteria, and construct validity.

When comparing AAQ-II and MEAQ, the researcher found that the correlation between AAQ and other scales was higher compared to MEAQ, which only has a moderate correlation. This could imply that AAQ-II is associated with distress variables such as neuroticism and negative effects than experiential avoidance.[12,24] Consequently, AAQ-II is more related to scales linked to distress than MEAQ. However, this was also the limitation of this study. Thus, future research should further examine valid criteria between the Thai version of AAQ-II and MEAQ and other scales relating to avoidance. Moreover, confirmatory factor analysis to confirm structure of both hypothesized measurement models found that it was necessary to modify the model by eliminating some items so that the models are more consistent with empirical data and have the items that can explain or assess the remaining EA. Thus, the use of these two questionnaires depends on measuring objectives. For example, if one

wants to measure psychological distress, the Thai version of the AAQ-II might be more suitable. However, if one wants to measure issues involving behavioral avoidance, the Thai version of MEAQ might be better. However, the psychometric properties of these questionnaires were assessed and analyzed from a specific sample as the study population is between 18 and 40 years old and is female more than male, so the results may have gender deference, and it is not generalizable to the rest of the age, gender, and the wider context.

CONCLUSION

This study found that the Thai versions of the AAQ-II and MEAQ have an acceptable level of psychometric properties in terms of validity and reliability since they are applicable to the Thai population aged between 18-40. Still, according to the results, there may be some items that require special attention and caution.

When comparing the Thai versions of AAQ-II and MEAQ, we can see that both questionnaires have a similar level of validity and reliability considered admissible. However, upon further investigation, the correlation between the Thai version of the AAQ-II and other scales is higher compared to MEAQ which only has a moderate correlation. This is in agreement with other reviews stating that AAQ-II tends to be associated with distress variables such as depression, anxiety, and stress. However, it is still able to assess experiential avoidance.[12,24] Hence, the use of each questionnaire will be depended on certain objectives. If one wants to measure psychological well-being or assess psychological distress such as anxiety, depression or emotional distress, the Thai version of the AAQ-II may be more suitable than its MEAQ counterpart, which concentrates on measuring behavior relating to avoidance. Still, further studies regarding the ability of both questionnaires to measure avoidance compared to other tests is required.

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Conflicts of interest: Ethical approval for this study was been granted by the Institutional Review Board of the Faculty of Medicine Siriraj Hospital at Mahidol University. Sections of these findings were presented at Siriraj Graduate Forum, Bangkok, Thailand, 2019. We have no conflicts of interest to disclose.

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