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Validity, reliability and cross-cultural adaptation of Muslims' Perceptions and Attitudes towards Mental Health scale (M-PAMH) among Muslims in Malaysia

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Abstract. The Muslims have unique attitudes and perceptions towards mental health. However, studies on this are mostly limited to Muslims in minority Muslim communities possibly due to presumption that Muslims in majority Muslim countries all share the same beliefs and perceptions. This study aims to examine the cultural adaptation and psychometric properties of the Muslims' Perceptions and Attitudes towards Mental Health Scale (M-PAMH) among Muslims in a majority Muslim country, namely Malaysia, among both Muslim men and women. Exploratory and confirmatory factor analysis were conducted. The M-PAMH Malay was found to be valid and reliable to assess the four domains outlined in earlier study. Two new items were added that indicated unique cultural differences. The rigorous process of translating and adapting the M-PAMH scale for the Malaysian Muslim population highlights the need to consider religious terms, cultural nuances, and contextual differences to ensure both semantic and conceptual equivalence.

Keywords: attitudes, Malaysians, mental health, Muslims, perceptions

Introduction

A number of studies in the area of Muslims' mental health focused on stigma and help-seeking behaviors among the Muslims community. For example, Al-Darmaki (2003) found that Muslims in the Emirates were more willing to seek help from families and religious leaders than formal mental health services which reflects a cultural reliance on informal support systems rather than professional mental health care.

In Malaysia, a study observed that many Muslims visited spiritual centers for help with illnesses, often attributing their conditions to supernatural causes. This applied to both individuals with a psychiatric diagnosis and those without. Interestingly, the study discovered that respondents with higher educational backgrounds were particularly reluctant to seek help from psychiatrists, feeling defensive about the stigma of being labeled "crazy" or "insane." Some felt they had improved through Islamic spiritual healing, further discouraging formal psychiatric intervention (Abdullah et al., 2017).

Stigma related to mental health remains a significant barrier in Malaysia. According to Hanafiah and Van Bortel (2015), individuals with mental illness often experience discrimination from those closest to them, such as family and friends. Hassan and colleagues (2018) also reported that Malaysian

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Muslims perception of mental illness as a taboo which led to increased stigma and rejection towards mental health services. Additionally, Minas et al. (2011) reported that patients with mental illness in Malaysia often face stigmatizing attitudes from healthcare staff, further deterring formal help-seeking behavior.

A study reported on Arab Muslims' belief that mental illness is caused by Allah, either as a punishment for sins or as a test (Aloud & Rathur, 2009) while Ilias and colleagues (2018) reported that it is common for Muslims to believe that mental illness are consequences of poor relationship with God (Ilias et al., 2018). However, these studies focus primarily on stigma and do not address broader perceptions and attitudes towards formal mental health services.

The majority of studies exploring Muslims' attitudes and perceptions about mental health professional services were however conducted among Muslims residing in Western countries. For example, Aloud (2004) studied about attitudes towards formal mental health services among Muslim Arabs living in Ohio, United States. While Awaad et al. (2019) and Ali et al. (2021) studied Muslim women in the United States, focusing on their attitudes and perceptions toward utilizing formal mental health services. In Britain, Musbahi et al. (2022) compared mental health attitudes and perceptions among young British Muslims and their non-Muslim peers.

The focus on Muslim minorities living in the Western countries could probably stem from the perception that their beliefs and perceptions are unique compared to the majority population and cultural norms of those countries. Muslims are often seen as having distinct perspectives due to the dynamics of their culture, religion and minority status, which makes them a unique population to be studied. On the other hand, Muslims in majority countries are often presumed to share the same beliefs and perceptions, thus leading to less academic focus on their mental health attitudes and perceptions.

One of the studies that explored Muslims beliefs towards mental health is conducted by Awaad et al. (2019). This study developed the Muslims' Perceptions and Attitudes Towards Mental Health (M-PAMH) scale. It is a culturally specific tool designed to measure Muslim individuals' perceptions and attitudes toward mental health and mental health services. The M-PAMH assesses four mental health domains; rejection attitudes toward professional mental health care, cultural and religious beliefs, mental health stigma, and familiarity with formal mental health services in the community. This scale has significantly improved on previous scales by offering the research community a brief, feasible, psychometrically robust, and culturally congruent measure that has been proven successful in researching Muslim women (Awaad et al., 2019). Unlike generic mental health assessment tools, the M-PAMH incorporates Islamic teachings, cultural values, and community-specific stigmas, making it uniquely tailored for Muslim populations.

One of the M-PAMH's uniqueness is its ability to address distinct aspects of Muslim experiences, such as the influence of spirituality, individual dynamics, and cultural stigma, which are often overlooked in other tools. Given these attributes, the M-PAMH scale is not only a reliable measure of perceptions and attitudes but also a valuable tool that can help gather information for development of culturally tailored mental health interventions in Muslim-majority and minority settings.

The study on psychometric properties of M-PAMH was carried out among Muslim women residing in the United States. Awaad et al. (2019) stated that respondents were focused on women as they play a prominent role in making family and community decisions. However, it is unknown how Muslim men perceives mental health services because if they do not condone formal mental health

services, this will also affect decision making within the family. Women on one hand, were found to have higher vulnerability to mental health issues than men (Kassim et al., 2022), hence better help-seeking behavior. Additionally, men face unique health challenges that are often overlooked (Idham et al., 2022). In Malaysia, men have higher mortality rates, with major causes linked to non-communicable diseases and injuries (Tong, Low & Ng, 2011), which may be exacerbated by unaddressed mental health issues, but which understudied.

The current study addresses two gaps in studies on beliefs and attitudes on mental health formal services among Muslim community: the lack of studies on Muslim populations in majority-Muslim countries and the underrepresentation of men.

By focusing on Muslims in Malaysia, this study provides much-needed insights into the perceptions and attitudes of Muslims in Muslim majority communities towards mental health. It moves beyond the stigma-related findings of previous studies to explore broader attitudes toward formal mental health services. This is particularly relevant as mental health issues continue to rise in Malaysia, affecting both men and women. By including men, the research acknowledges their unique mental health perceptions and stigma. The findings of this study can inform culturally appropriate mental health strategies that address the unique needs and beliefs of Muslim-majority communities, ultimately contributing to improved mental health outcomes for both individuals and families.

The objectives of this study are:

i) To address the scarcity of research on mental health perceptions and attitudes among Malay Muslims towards mental health by cross-culturally adapt and translate the M-PAMH in Malay language for use in the Malaysian Muslim community.
ii) To evaluate the validation and reliability of the M-PAMH Malay version in the Malaysian Muslim community, including both men and women, to ensure its applicability across genders in the community.

Method

Procedure

There are two phases in this study. The first phase comprises of translating and cross-culturally adapting Muslims' Perceptions and Attitudes towards Mental Health scale (M-PAMH) developed by Awaad et al. (2019) in Malay version. Subsequently, in the second phase, the study proceeded with the validation process of M-PAMH Malay in Malaysian Muslim community. In the first phase, translation processes and cross-cultural adaptation were carried out, guided by a cross-cultural adaptation and validation of psychological instruments by Borsa, Damasio and Bandeira (2012).

Stage 1: Forward and backward translation of original English version to Malay version 1

Two independent native Malay speakers, one is a clinical psychologist and another is a social scientist were involved in forward translation to produce the M-PAMH Malay version 1. The translation was synthesized by the lead author and a research assistant. Subsequently, two different independent bilingual translators from clinical psychology background and another with linguistics background translated back the Malay version to English. Again, the lead author and a research assistant synthesized the translation.

Stage 2: Expert reviews on translated version of M-PAMH producing the Pre-Final M-PAMH Malay version.

The Malay version of M-PAMH were then discussed thoroughly with other experts who consist of a psychiatrist and a medical doctor with a vast experience of social work with Malay Muslim population with low socio-economic income. The expert committees reviewed and discussed on the pre-final Malay version looking at four aspects, including (a) item consistency to content area, (b) item word clarity, (c) perceived item difficulty, and (d) whether (and why) they think the item should be included in a revised version of the test.

Stage 3: Pre-testing with Pre-Final M-PAMH Malay version and producing Final Malay version of M-PAMH

Readability and suitability of the items were assessed through preliminary evaluation among 20 Malaysian Muslims samples (from various socio-economic status and age ranging from 18 to 63 years old) hosted on mobile messaging platforms. Feedbacks were gathered through interviews and through questions in electronic forms circulated with the scale. In accordance to the feedback, study researchers then improved the questionnaire items in terms of the clarity, comprehensibility and suitability of the wordings in the translated questionnaire. Subsequently, another discussion was conducted with the researchers to decide on the final version of the M-PAMH-Malay.

Ethics Approval

Before data collection, IIUM Ethics Approval (I-REC) were first obtained and consent information was provided to all participants. The survey was distributed and data collection was carried out within two months duration. The participants were informed about the nature of the study and that their participation in the study was voluntary.

Measures

In the present study, the 21 item M-PAMH-Malay scale and a socio-demographic questionnaire were distributed to the participants. For the M-PAMH-Malay scale, a 4-item Likert-type scale that assesses the degree of agreement to each statement ranges from 1 (“strongly disagree”) to 4 (“strongly agree”) was used. Questions in the later section were scored using a 4-item Likert-type scale which assessed their knowledge on certain information ranging from 0-3 (0 = not at all, 1 = have a little knowledge, 2 = have adequate knowledge, 3 = have a lot of knowledge).

The following are the information regarding the M-PAMH-Malay scale and the socio-demographic questionnaire (Table 1):

Table 1. Information break-down on the M-PAMH-Malay and the socio-demographic questionnaire

Section 1	Questions on attitudes toward professional mental health care
Section 2	Questions on cultural and religious beliefs as they relate to causes and treatments of disorders
Section 3	Questions assessing the levels of familiarity and knowledge of mental health services
Socio-demographic-Section 4	Demographic questions (age, gender, race, income & residential states, education, status and occupation)

Validation Study

Subsequently, researchers proceeded with the validation study of the M-PAMH-Malay. For the validation study, eligible Malaysian Muslims in Peninsular Malaysia were recruited using snowball technique. An online form which included the information page, consent form, socio-demographic and M-PAMH questionnaire was distributed through mobile messaging platforms and social media platforms. Researchers also used the help of Malaysian mental health advocators who helped to post the research link in their social media platform. Individuals receiving the research link then shared the link to their friends using the mobile platforms and social media.

Participants

A total of 2155 respondents participated in the study. Participants were excluded based on the inclusion criteria of this research including the age of the participants, religion, and those with missing data were also excluded. Figure 2 shows the number of participants involved and excluded in the study. The final number of respondents that was used for validation analysis was 2116.

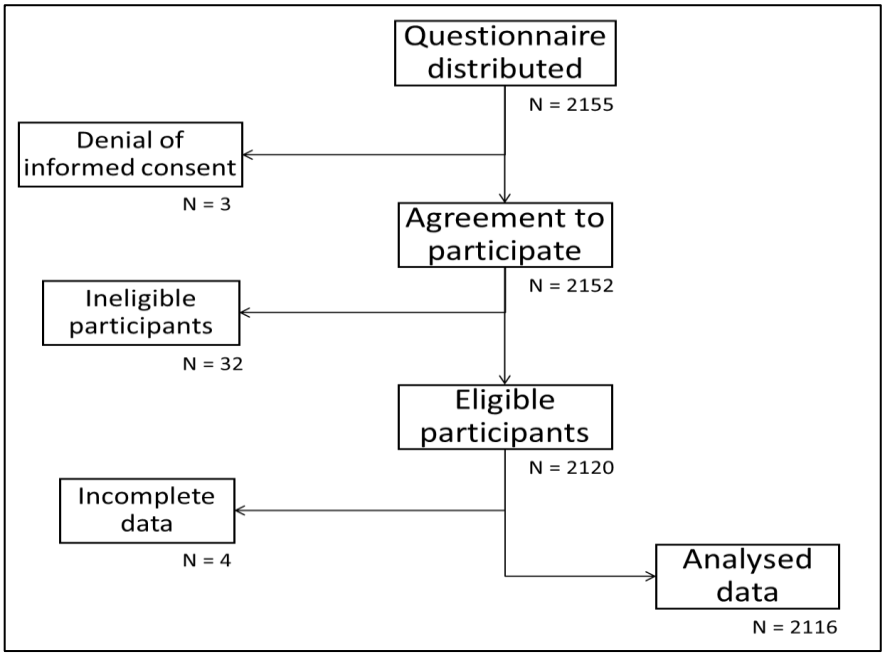

Figure 1. The number of participants recruited and excluded in the study

Socio-demographic data

Descriptive statistics showed that there were 20.5% (n=434) male and 79.5% female (n=1682) participants involved in this study. The age range of participants were 18-35 (n=1440), 36-45 (n=360), 46-55 (n=190), 56-65 (n=105), 66 above (n=21). As for socio-economic status (SES), 48.8% (n=1032) are from low SES, 36.1% (n=764) are from middle SES while 15.1% (n=320) are from low SES. 58.8% respondents are single, 38.8% are married and 2.4% are divorcee/widow. All 14 states in Malaysia are represented, with Selangor showing the highest respondents (n=656). In terms of education, 10% have education up to primary/secondary school, 73% have either a certificate, diploma or bachelor's degree, whereas 17% have postgraduate degree.

Data Analysis

Construct validity was performed to evaluate if a particular measurement tool actually represents the thing that researchers want to measure. It plays a key role in signifying the overall validity of a specific method. In the analysis process, SPSS version 20 (Statistical Package for Social Sciences software) was used to categorize data for descriptive analysis and to perform Exploratory Factor Analysis (EFA). Confirmatory factor analysis (CFA) was performed using JAMOVI 2.2.5.

Use of Open AI

The researchers used [https://chat.openai.com/] and [https://quillbot.com/paraphrasing-tool] to help condense and paraphrase the sentences of the introduction, findings and discussion sections of this article.

Findings

Pilot-Test Findings and Cultural Adaptation

The pilot testing of the pre-final Malay version of the M-PAMH was critical in attaining cultural and linguistic equivalency among Malaysian Muslims. It was found that the feedback from the pilot group, which included a broad sample in terms of socioeconomic position, age, education, and state of residence, gave very important insights regarding the translated scale's readability, clarity, and cultural relevance. This iterative procedure allows for the refinement of the scale while also revealing key distinctions between the original M-PAMH and the Malay M-PAMH.

For example, adding the line "As far as you know..." to an item explained the question's aim, which a respondent had initially misinterpreted as evaluating his knowledge rather than asking for his personal opinions. This small but significant improvement increased the scale's clarity, ensuring that items were understood correctly. Such modifications highlight the importance of pilot testing in cross-cultural adaptation to ensure that semantic and cultural equivalence resonates across various linguistic and cultural contexts.

Addressing Contextual Differences

The adaptation process revealed significant contextual differences between the original M-PAMH, developed for American Muslims, and the Malaysian Muslim population. One example was the modification of an item about familiarity with the availability of mental health services. In the Malaysian context, many Malaysians still lack awareness of or exposure to formal mental health services, leading to confusion about the original question. By rephrasing the item to directly ask whether respondents knew how to contact mental health services, the researchers ensured that the question was not only understandable but also relevant to the local population’s experiences. This modification signifies how cultural and systemic factors can influence perceptions and attitudes toward mental health and the importance of tailoring research tools to reflect these nuances.

Incorporating Cultural Beliefs

The pilot group's feedback also highlighted the importance of including components of mental health beliefs that are unique to Malaysian Muslim culture. Respondents stated that they believe that

mental health disorders happen as the result of previous wrongdoings or as tests of patience and faith. These culturally embedded ideas, confirmed by earlier studies (Ilias et al., 2018; Abdullah et al., 2017), prompted the addition of three new items to the Malay version of the M-PAMH. These questions reflect ideas regarding mental health as a divine test, the significance of building one's connection with God in order to be healed, and the concept of sin as a source of mental health problems.

By incorporating these cultural components, the M-PAMH-Malay improves its relevance and validity for Malaysian Muslims while also providing a more thorough instrument for understanding how religion and cultural beliefs influence mental health attitudes and perceptions. This method is consistent with best practices in cross-cultural adaptation, which emphasize the necessity of including local cultural dimensions in research tools.

Validation Study

Prior to conducting the main statistical analyses, we screened the data for outliers, normality, and missing values. All individual items met standards of univariate normality.

A principal components analysis was first applied to the 21 items. We divided the data into two sets. (1058 in each sets). Given that some degree of correlation within the factor structure, an Oblimin rotation was employed for the Exploratory Factor Analysis with the first set of data. Visual inspection of the scree plot revealed a 4-factor structure. The analysis was constrained to 4 factors and rerun. Four items exhibited loadings below the .38 cut off were removed (items 2, 12, 15, 11). The pattern matrix for the 4-factor solution of the remaining 17 items was then used for Confirmatory Factor Analysis (CFA).

The other half of the data was then performed in a confirmatory factor model in JAMOVI 2.2.5. As illustrated in Figure 3, individual items loaded on four respective latent subscale factors, which in turn loaded on an overall latent variable. Two items were removed due to its low loading. The overall model fit was found to be adequate, x2/df= 4.7, CFI= 0.95, TLI= 0.94, SRMR= 0.05, and RMSEA= 0.06 (Hair et al., 2009). Standardized factor loadings showed that all items loaded on their respect factors with moderate to large effect size, ranging from 0.40 to 0.85 for the subscale factors. The results of the CFA and the final items of the M-PAMH Malay are illustrated in Table 2.

Table 2. Factor Structure and Factor Loading of the M-PAMH Scale- Malay

	tems	**Factor Loadings**			
		Rejection	**Beliefs**	**Stigma**	**Familiarity**
1.	Kebanyakan masalah mental boleh diselesaikan sendiri tanpa bantuan pakar kesihatan mental	.48			
2.	*Saya akan mendapat ganjaran pahala sekiranya saya bersabar dengan masalah mental yang saya hadapi (tanpa mendapatkan bantuan luar)	.40			
3.	Mendapatkan perkhidmatan kesihatan mental sepatutnya menjadi pilihan terakhir selepas mencuba semua pilihan lain (contohnya: menyelesaikan sendiri, berjumpa orang alim, atau berkongsi dengan rakan)	.56			
4.	Seperti juga masalah lain, masalah mental biasanya akan selesai dengan sendirinya	.46			
5.	Masalah mental boleh disebabkan oleh hasad dengki atau buatan orang		.45		

6.	Walaupun saya telah mendapat rawatan daripada pakar kesihatan mental, saya tetap akan meminta bantuan dari orang alim (contohnya: pengamal perubatan Islam atau ustaz) untuk masalah mental yang saya hadapi	.52		
7.	TIDAK SEMUA masalah mental boleh dirawat dengan rawatan kesihatan mental kerana terdapat masalah yang memerlukan rawatan perubatan Islam (bacaan Quran)	.55		
8.	*Masalah mental boleh diselesaikan dengan memperbaiki hubungan dengan Allah	.57		
9.	Masalah mental boleh dirawat dengan rawatan perubatan Islam (bacaan Quran)	.65		
10.	Masalah mental boleh disebabkan oleh gangguan jin (makhluk halus)	.49		
11.	Saya berasa sukar mendapatkan rawatan sakit mental berbanding rawatan penyakit lain disebabkan oleh stigma atau rasa malu dengan pandangan masyarakat		.85	
12.	Stigma dan pandangan negatif orang lain menyebabkan saya berasa malu untuk mendapatkan rawatan sakit mental		.74	
13.	Sejauh mana anda tahu tentang perkhidmatan kesihatan mental dalam komuniti anda (cara menghubungi, lokasi, jenis perkhidmatan)?			.65
14.	Sejauh mana anda tahu tentang jenis penyakit yang boleh dirawat oleh pakar kesihatan mental (contoh: kecelaruan mental, kemurungan, dan lain-lain)?			.69
15.	Sejauh mana anda tahu tentang kewujudan pakar kesihatan mental beragama Islam dalam komuniti anda?			.75

Research Implications

The results of the pre-test and pilot stages highlight how complex it is to modify mental health measures for individuals with various cultural backgrounds. By showing how culturally unique ideas, systemic issues, and linguistic nuances can impact perceptions and attitudes, the changes made during this study can contribute towards advancing the area of mental health research. The procedure also serves as an example of how interactive feedback can help close the gap between the original context of a tool and its use in different cultural contexts, ultimately producing a more valid tool that can be used confidently.

Discussion

In the present study, researchers present a systematic approach for the translation and adaptation of Muslim Perceptions and Attitudes towards Mental Health Scale (M-PAMH). According to literature on cross-cultural studies, considerable care is needed to ensure that a systematic process of translation and adaptation of an instrument is followed, in order to attain a cultural equivalence (Mat'ias-Carrelo, Chavez, Negr'on, Canino, Aguilar-Gaxiola, & Hoppe, 2003).

The procedures used for cross-cultural adaptation of psychological instruments were guided by a paper by Borsa, Damasio and Bandeira (2012). The guide stated that to minimize the risk of linguistic, psychological, cultural and theoretical and practical understanding biases, at least two bilingual translators who are proficient in both languages and culture of the target group are needed (Borsa,

Damasio & Bandeira, 2012). Therefore, researchers used the services of two independent translators who are bilingual in English and Malay (one of which is a licenced translator) and who have psychological and social science background for the forward translation.

While for the backward translation, researchers used the services of a bilingual psychologist and a linguist with a social science background. In between forward and backward translations, the researchers had a thorough discussion to synergize both translations to arrive at a consensus.

Researchers then incorporated cross-cultural adaptation using two strategies; the expert committee discussion and the pilot-test which involved interviews using online messaging platforms with respondents of various ages and backgrounds. The expert committees were knowledgeable about the constructs of the instruments assessed, as well as the population to be studied. The committee reviewed the instrument in order to agree on wording that was common to all levels of socio-economic income and education levels of the Malaysian Muslims. The committee also provided feedback to the technical equivalence of the instrument such as the layout and technical conventions.

Carefully modification on each of the items was made in accordance with the feedback gathered guided by semantic and content equivalence findings. Technical equivalence was not used as much because online survey was used.

The main challenge was to adapt the scale while considering the different culture of the Malaysian Muslims with the American Muslims in which it was developed and validated. Researchers found difficulty in discerning some of the Arabic words and religious connotations to make it simple and understandable for the lay Muslim Malaysian. For example, researchers would initially retain many Arabic terms in the scale and elaborate on the meaning (usually in brackets), but after the pilot test was conducted, respondents were of view that the Arabic words may be meaningless for the general population and thus recommended to keep the sentence short, simple and concise, removing most if not all the Arabic terms.

Therefore, the incorporation of the pilot-test and gathering of their feedback was crucial in obtaining content and semantic equivalence, significant for the comprehensive adaptation of the instruments. The feedback from the respondents also showed that achieving linguistics is necessary, but not sufficient, in obtaining cultural equivalence of an instrument. It was noted that only the ability to develop a literal translation does not guarantee that the instrument's content will be culturally relevant and sensitive. Researchers observed that while detailed translation processes had been made, the pilot respondents will still have difficulties to understand several items due to the complexity of the items, participants' understanding regarding the construct being measured, or the items' irrelevance to participants' cultural context. Therefore, it is essential that the cross-cultural processes were implemented carefully.

As a collectivist society, Malaysians tend to not be expressive and keeping their feelings and thoughts inside (Sumari, Baharudin, Md Khalid, Ibrahim & Ahmed Tharbe, 2020) hence it is understandable when several respondents in the pilot group responded that they thought the items were actually testing their knowledge than asking their opinions. This could be due to the Malaysian culture which is not familiar with expressing their opinions and feelings directly. As a result, modifications were made to some items to include "To my point of view…" so as to show that we would like to ask their personal opinions rather than testing their knowledge.

The principal, exploratory and confirmatory factor analyses indicated a very good fit of the data with the four-factor structure as were the original scale. This study brought to better understanding and increased insights towards subtle cultural differences between Muslim communities from different countries, that needs to be taken into important consideration when validating a scale developed from a different culture, albeit with similar faith and beliefs.

Conclusion

This study emphasizes how crucial cultural sensitivity is to the validation and adaptation of mental health assessment instruments. The meticulous process of translating and modifying the M-PAMH scale for the Muslim community in Malaysia emphasizes the necessity of taking into account contextual variations, cultural nuances, and religious terminology in order to guarantee semantic and conceptual equivalency. Pilot testing, respondent input through the pilot study, and consultation among experts helped the study overcome these obstacles and create a Malay version of the M-PAMH scale that is both linguistically and culturally suitable and validated for both genders.

Future studies and mental health treatments aimed at Malaysian Muslims can benefit greatly from the validated M-PAMH-Malay scale. It is in a unique position to increase knowledge of how this community perceives mental health due to its capacity to collate culturally distinctive attitudes and beliefs.

Results gained from the exploratory and confirmatory factor analyses results demonstrated that the M-PAMH Malay is a good fit with the factor structures as were found in the original English questionnaire, namely: rejection attitudes toward professional mental health care, cultural and religious beliefs, mental health stigma, and familiarity with formal mental health services in the community.

This deems M-PAMH Malay to be a questionnaire that can be used with confidence among Malaysian Muslims. It is an important scale to increase insights among mental health researchers as to the populations' attitudes and perceptions regarding mental health which is hoped to eventually contribute towards effective mental health literacy programs implementation among Muslims in Malaysia.

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