



# TRANSLATION AND PSYCHOMETRIC PROPERTIES OF ATTITUDES QUESTIONNAIRE INTO MALAY VERSION

Nurul Asheera Alimin, Syamsul Anwar Sultan Ibrahim, Dr. Akehsan Dahlan  
[nurulasheera8@gmail.com](mailto:nurulasheera8@gmail.com), [syam85@gmail.com](mailto:syam85@gmail.com), [akehsan@puncakalam.uitm.edu.my](mailto:akehsan@puncakalam.uitm.edu.my)  
 Occupational Therapy Department, UiTM Puncak Alam, Selangor, Malaysia

## INTRODUCTION

- There are several major reviews on studies of demographic variables associated with negative attitudes toward disabled people (Marini, I. & Stebnicki, M.A., 2012).
- In socioeconomic status, the lower income groups shows less favourable attitudes toward people with disabilities than higher income groups and the educational level is positively correlated with positive attitudes toward disabled people (Livneh, H., 2012).
- Currently, there are many assessments to measure attitudes level toward people with disabilities such as Attitudes toward Disabled Persons Scale (ATDP), but none had been translated to Malay language.

## LITERATURE REVIEW

- Public Attitudes toward Epilepsy (PATE) scale was translated into Malay version and reliability and validity was tested (Lim, K.S., Choo, W.Y., Wu, C. & Tan, C.T., 2013). The construct validity and internal consistency was used to analyze the items.
- The total means score of general and personal domains have strong correlation as the correlation coefficient values are 0.919 and 0.782 respectively. While the Cronbach's alpha value for both domains were within acceptable range which are 0.7 to 0.9.
- Based on study of Lacono, T., Tracy, J., Keating, J. & Brown, T. in 2009, The Interaction with Disabled Persons scale (IDP) has been used in research into baseline attitudes and to evaluate whether a shift in attitudes towards people with developmental disabilities. By using Cronbach's alpha, the internal consistency of the IDP ranged from 0.74 to 0.86.

## PROBLEM STATEMENT

- The Attitudes Questionnaire not had been translated to Malay language, as the problems being addressed in this study are the reliability and validity of Attitudes Questionnaire to be use among population in Malaysia.
- It may not be culturally appropriate when being administered for those with low educational level or who are not fluently in English since English is not the native language of the Malaysian people.

## OBJECTIVE

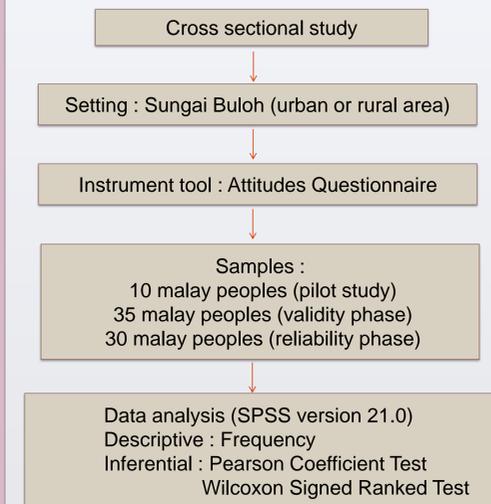
### General objective

- To translate Attitudes Questionnaire into Malay version in order for the Malaysian people can use this questionnaire to identify the levels of attitudes of a person toward disabled people.

### Specific objectives

- To translate the Attitudes Questionnaire into Malay version.
- To establish the psychometric properties of the translated version of Attitudes Questionnaire.

## METHODS



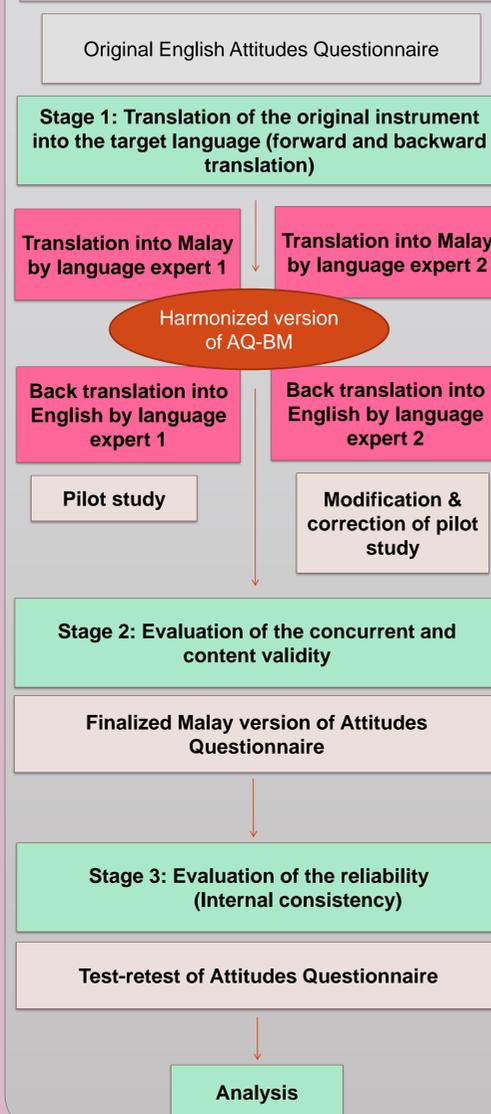
### Inclusion criteria

- Malay people age range from 20 to 50 years.
- People that able to read and understand the English and Malay language.
- People that has good visual to administer the questionnaire.

### Exclusion criteria

- Malay people aged below than 20 years and above 50 years.
- People who are unable to read and understand the English and Malay language.
- People that has impaired vision.

## Translation and Psychometric properties of Attitudes Questionnaire into Malay version



## RESULTS

Stage 1 : Translation of the original instrument into the target language (forward and backward translation)

### PILOT STUDY

Out of 10 samples, (n=7) of them faced some difficulties to understand the questions while the rest (n=3) of them has no problem.  
 50% (n=5) of them may not clear the word of 'ketakupayaan' in the questionnaire given.  
 Therefore, discussion was made and the word 'ketakupayaan' was substituted with the word 'kurang upaya'

Table 1: Pearson Correlation Coefficient test (r) of Malay version and English version of Attitudes Questionnaire

|             | Mean (SD)     |               | r     |
|-------------|---------------|---------------|-------|
|             | AQ-BM         | AQ-BI         |       |
| Question 1  | 4.114 (1.231) | 4.057 (1.327) | 0.950 |
| Question 2  | 3.943 (1.187) | 3.886 (1.207) | 0.858 |
| Question 3  | 5.057 (0.838) | 5.229 (0.770) | 0.663 |
| Question 4  | 2.829 (0.822) | 3.486 (1.173) | 0.699 |
| Question 5  | 1.886 (1.022) | 1.857 (0.944) | 0.775 |
| Question 6  | 3.657 (1.211) | 3.429 (1.243) | 0.647 |
| Question 7  | 4.429 (0.884) | 4.571 (0.739) | 0.875 |
| Question 8  | 5.514 (0.562) | 5.229 (0.843) | 0.303 |
| Question 9  | 2.686 (1.430) | 2.543 (1.400) | 0.675 |
| Question 10 | 3.571 (1.220) | 3.829 (1.150) | 0.869 |
| Question 11 | 3.486 (0.951) | 3.543 (0.919) | 0.868 |
| Question 12 | 1.771 (0.646) | 1.829 (0.568) | 0.532 |
| Question 13 | 1.714 (0.710) | 1.800 (0.719) | 0.633 |
| Question 14 | 4.800 (0.719) | 4.914 (0.702) | 0.839 |
| Question 15 | 4.200 (1.079) | 4.200 (1.079) | 0.773 |
| Question 16 | 2.200 (1.023) | 2.343 (1.136) | 0.825 |
| Question 17 | 1.543 (0.817) | 1.829 (0.985) | 0.704 |
| Question 18 | 3.971 (1.014) | 4.086 (0.951) | 0.674 |
| Question 19 | 3.857 (1.264) | 3.686 (1.301) | 0.956 |
| Question 20 | 3.514 (0.919) | 3.771 (0.843) | 0.232 |
| Question 21 | 4.514 (1.222) | 4.143 (1.498) | 0.602 |
| Question 22 | 1.229 (0.426) | 1.200 (0.406) | 0.919 |
| Question 23 | 3.714 (1.073) | 3.743 (1.039) | 0.856 |
| Question 24 | 1.743 (0.741) | 1.886 (0.676) | 0.644 |
| Question 25 | 5.000 (0.907) | 4.800 (0.677) | 0.718 |
| Question 26 | 2.029 (1.175) | 2.086 (1.121) | 0.891 |
| Question 27 | 2.829 (1.689) | 2.743 (1.559) | 0.932 |
| Question 28 | 3.571 (1.219) | 3.400 (1.241) | 0.758 |
| Question 29 | 5.114 (0.718) | 5.171 (0.664) | 0.636 |
| Question 30 | 2.771 (1.374) | 2.743 (1.268) | 0.860 |
| Question 31 | 4.600 (1.117) | 4.457 (1.010) | 0.584 |
| Question 32 | 2.286 (1.426) | 2.371 (1.437) | 0.865 |
| Question 33 | 5.229 (0.690) | 4.943 (0.725) | 0.674 |
| Question 34 | 5.057 (0.906) | 5.114 (0.932) | 0.828 |
| Question 35 | 5.514 (0.562) | 5.314 (0.530) | 0.330 |
| Question 36 | 3.286 (1.274) | 3.257 (1.221) | 0.670 |
| Question 37 | 1.543 (0.886) | 1.714 (0.893) | 0.837 |
| Question 38 | 4.800 (0.759) | 5.029 (0.857) | 0.551 |
| Question 39 | 2.657 (1.305) | 2.743 (1.268) | 0.549 |
| Question 40 | 2.914 (1.197) | 2.800 (1.256) | 0.888 |
| Question 41 | 4.486 (1.011) | 4.686 (0.867) | 0.582 |
| Question 42 | 5.543 (0.611) | 5.514 (0.612) | 0.569 |

Table 2: Wilcoxon Signed Rank Test

| Variables   | Pre-test Median (IQR) | Post-test Median (IQR) | Z-scores | P-value |
|-------------|-----------------------|------------------------|----------|---------|
| Question 1  | 5.00 (0.25)           | 5.00 (1.25)            | 1.200    | 0.000   |
| Question 2  | 4.00 (2.00)           | 4.00 (2.00)            | 0.311    | 0.000   |
| Question 3  | 5.50 (1.00)           | 5.00 (1.00)            | 1.538    | 0.000   |
| Question 4  | 3.00 (2.00)           | 3.00 (2.00)            | -0.548   | 0.000   |
| Question 5  | 2.00 (1.25)           | 2.00 (1.00)            | -1.130   | 0.000   |
| Question 6  | 3.00 (2.00)           | 3.00 (1.00)            | -0.548   | 0.000   |
| Question 7  | 4.00 (2.00)           | 4.00 (1.25)            | 0.495    | 0.000   |
| Question 8  | 5.00 (1.00)           | 5.00 (1.00)            | 1.476    | 0.004   |
| Question 9  | 3.00 (1.25)           | 3.00 (1.00)            | -0.870   | 0.000   |
| Question 10 | 4.00 (2.00)           | 4.00 (1.00)            | 0.418    | 0.000   |
| Question 11 | 3.00 (1.00)           | 3.00 (1.00)            | -0.471   | 0.000   |
| Question 12 | 2.00 (1.00)           | 2.50 (1.00)            | -1.115   | 0.000   |
| Question 13 | 2.00 (2.00)           | 2.00 (2.00)            | -1.345   | 0.000   |
| Question 14 | 5.00 (1.00)           | 5.00 (1.00)            | 0.863    | 0.432   |
| Question 15 | 4.00 (2.00)           | 4.00 (2.00)            | 0.234    | 0.000   |
| Question 16 | 2.50 (1.00)           | 3.00 (1.25)            | -0.931   | 0.000   |
| Question 17 | 2.00 (2.00)           | 2.00 (2.00)            | -1.330   | 0.000   |
| Question 18 | 3.00 (1.00)           | 3.00 (1.00)            | -0.318   | 0.000   |
| Question 19 | 4.00 (2.25)           | 4.00 (1.00)            | 0.434    | 0.000   |
| Question 20 | 3.00 (2.00)           | 3.00 (1.00)            | -0.180   | 0.000   |
| Question 21 | 4.50 (1.00)           | 4.00 (2.00)            | 0.648    | 0.002   |
| Question 22 | 1.00 (1.00)           | 1.00 (1.00)            | -1.881   | 0.000   |
| Question 23 | 4.00 (1.25)           | 3.50 (2.00)            | 0.234    | 0.000   |
| Question 24 | 2.00 (1.00)           | 2.00 (1.00)            | -1.835   | 0.000   |
| Question 25 | 5.00 (1.25)           | 5.00 (2.00)            | 1.154    | 0.000   |
| Question 26 | 2.00 (1.00)           | 2.00 (1.00)            | -0.962   | 0.000   |
| Question 27 | 4.00 (2.25)           | 4.00 (2.00)            | -0.118   | 0.000   |
| Question 28 | 4.00 (1.00)           | 4.00 (1.00)            | 0.020    | 0.000   |
| Question 29 | 5.00 (1.00)           | 5.00 (1.00)            | 1.062    | 0.000   |
| Question 30 | 3.00 (2.00)           | 3.00 (2.00)            | -0.456   | 0.000   |
| Question 31 | 5.00 (1.00)           | 5.00 (1.00)            | 1.000    | 0.000   |
| Question 32 | 2.00 (2.00)           | 3.00 (2.00)            | -1.054   | 0.001   |
| Question 33 | 5.00 (2.00)           | 5.00 (2.00)            | 1.277    | 0.000   |
| Question 34 | 5.00 (0.25)           | 5.00 (1.00)            | 1.308    | 0.000   |
| Question 35 | 5.00 (1.00)           | 5.00 (0.50)            | 1.246    | 0.000   |
| Question 36 | 3.00 (1.25)           | 3.00 (2.00)            | -0.578   | 0.007   |
| Question 37 | 2.00 (1.00)           | 1.00 (1.00)            | -1.651   | 0.000   |
| Question 38 | 4.50 (1.25)           | 5.00 (1.00)            | 0.970    | 0.123   |
| Question 39 | 3.00 (2.00)           | 3.00 (2.00)            | -0.425   | 0.000   |
| Question 40 | 3.50 (1.25)           | 4.00 (2.00)            | -0.348   | 0.000   |
| Question 41 | 4.00 (1.00)           | 5.00 (1.00)            | 0.863    | 0.000   |
| Question 42 | 5.00 (1.00)           | 5.00 (1.25)            | 1.338    | 0.000   |
| TOTAL       | 107.50 (59.25)        | 106.50 (62.00)         | -0.616   | 0.502   |

Table 3: Descriptive Statistic and Test Retest Reliability of Attitudes Questionnaire

| Variable | Mean (SD)      | Different (Test-Retest) (Min,Max) | ICC (95% CI) $\alpha$ |
|----------|----------------|-----------------------------------|-----------------------|
| Test     | 108.10 (32.57) | 0.5 (2,3)                         | 0.994                 |
| Retest   | 108.62 (32.76) |                                   | (0.988, 0.997)        |

## DISCUSSIONS

- As compared to past study by Fidler, L., Vilchinsky, N., & Werner, S. in 2007, the content validity of Medical student Attitude toward persons with disabilities instrument was established by reviews each items meticulously and revisions from experts which same procedure with the validation of content of Attitudes Questionnaire in Malay version.
- Besides, result of correlation between English and Malay version of Attitudes Questionnaire ranges from 0.232 to 0.950 shows poor to excellent positive which having similarity with result study of Lim, K.S. et al (2013) as have strong correlation between two domains.
- Based on Lacono, T., et al. in 2009, test-retest were conducted to samples of minimum 30 respondents with minimum of one week interval shows high internal consistency.
- Findings from result of the Attitudes Questionnaire shows no significant different in pre-test and post-test which means the Null hypothesis is accepted.

## CONCLUSION

This study were participated by different respondents for each phase which included male and female. In concurrent validation of Attitudes Questionnaire, it shows significant strong positive correlation between the English version and Malay version. While in reliability of Attitudes Questionnaire-BM, result shows no significant difference but has high internal consistency which indicates the questionnaire was moderately understood by the respondents and may be administered toward public community in Malaysia to identify the attitudes toward people with disabilities.

### LIMITATIONS

- The sample size was too small for the research finding.
- The geographical area for study location was not widely spread in Malaysia as the questionnaire only distributed in Sungai Buloh area.
- Age range of the respondents mostly from age 20 to 30 years old.
- This studies not emphasis on the factor analysis.

### RECOMMENDATIONS

- It can be done with different population in different settings to enhance the reliability and validity of the assessment tool.
- The future research may continue on the evaluation of construct validity (factor analysis).

## REFERENCES

- Fidler, L., Vilchinsky, N., & Werner, S. (2007). The Multidimensional Attitudes Scale Toward Persons With Disabilities (MAS): Construction and Validation. *Rehabilitation Counseling Bulletin*, 50(3), 166-176.
- Lacono, T., Tracy, J., Keating, J. & Brown, T. (2009). The Interaction with Disabled Persons scale: Revisiting its internal consistency and factor structure, and examining item-level properties. *Research in Developmental Disabilities*, 30(2009), 1490-1501.
- Lim, K.S., Choo, W.Y., Wu, C. & Tan, C.T. (2013). Malay Public Attitudes Toward Epilepsy (PATE) scale: Translation and psychometric evaluation. *Epilepsy & Behavior*, 29(2), 395-399.
- Livneh, H. (2012). On the origins of negative attitudes toward people with disabilities. Sussman, S.W. & Claire, L. (Eds.), *The Psychological and Social Impact of Illness and Disability, 6th Edition* (pp. 13-25). United States: Springer Publishing Company.
- Marini, I. & Stebnicki, M.A. (2012). *The Psychological and Social Impact of Illness and Disability, 6th Ed.* New York : Springer Publishing Company.

## ACKNOWLEDGEMENT

The author thank you to the supervisor, Mr. Syamsul Anwar bin Sultan Ibrahim for lessons, guidance and correction towards the improvement of this study. Also, thank you to the original author of Attitudes Questionnaire, Mr. Anthony J. Goreczny and thank you to everyone that helps me out a lot in accomplishing the project.