RESEARCH ARTICLE

Cross-cultural adaptation and reliability of the Filipino version of the Attitude to Disability Scale

Krysta Ellieza C. Perez*, Frances Rom M. Lunar, Marvin Louie S. Ignacio, Yves Y. Palad

*Corresponding author's email address: kcperez@up.edu.ph

Department of Physical Therapy, College of Allied Medical Profession, University of the Philippine Manila, Manila, Philippines

ABSTRACT

Background: Negative attitudes towards disability must be addressed to promote better quality of life for Filipino persons with disability, but measures to identify these attitudes are not available in the local context. The World Health Organization (WHO) Quality of Life Disability Group's Attitude to Disability Scale (ADS) was identified to be a promising tool for this due to the participatory and cross-cultural approach used for its development and its good psychometric properties.

Objectives: This study aimed to culturally adapt the ADS – Physical Disability forms to Filipino. The study also aimed to determine the test-retest reliability and internal consistency of the translated forms.

Methodology: The translation process followed recommendations from literature and WHO. The translated forms were pre-tested on 12 Filipino participants with similar profiles to target users to refine the translated forms. Data collection on 362 participants in Metro Manila and surrounding provinces was conducted to evaluate internal consistency of the forms using Cronbach's alpha coefficient. Ninety-seven participants underwent retesting to evaluate the test-retest reliability of the translated forms using Intraclass Correlation Coefficient (ICC).

Results: The translation process ensured semantic and conceptual equivalence with the original form and experiential appropriateness for Filipino use. Both translated forms demonstrated good internal consistency (Cronbach's $\alpha = 0.67$ to 0.82). ICC estimates suggest poor to moderate test-retest reliability (ICC = 0.220 to 0.705).

Conclusion: The ADS - Physical Disability forms were culturally adapted to Filipino and were found to reliably measure attitudes towards disability of Filipinos, save for some improvements for test-retest reliability. Further studies are also recommended to ascertain the forms' validity.

Keywords: *ADS, negative attitude, adaptation, reliability, Filipino, disability*

Introduction

Persons with disabilities (PWDs) in the Philippines experience negative attitudes of society that significantly impact their quality of life [1,2]. These attitudes reinforce the already burdening barriers that restrict full participation of PWDs in society such as limited opportunities for education and employment, limited access to medical and social services, lack of knowledge of PWDs on their own rights, and low socioeconomic status [2-7].

The World Health Organization (WHO), in their Report on Disability, recognizes the creation of programs targeting knowledge and attitudes which is often the first step towards increasing social participation of PWDs [8]. This is supported by studies and reports suggesting that negative attitudes need to be challenged to allow inclusion and better quality of life among PWDs [1,3,9,10]. Negative attitudes must be identified and understood to formulate relevant and contextual interventions [10]. Hence, measures are warranted for gathering data to understand the general attitudes toward disability and to inform different programs that aim to improve these attitudes, and therefore, the quality of life of PWDs.

Several existing tools measure attitudes towards disability [11]. These instruments measure different dimensions of

attitudes of varied populations towards different kinds of disabilities. However, the contents of the tools and the language in which these were originally delivered may not be contextually appropriate across different cultures [12]. Since previously identified tools were made in English-speaking and/or Western countries, their application for use in another country with a different culture and language would necessitate cultural adaptation [11,12]. Cultural adaptation of tools to Filipino ensures appropriateness of items to the Filipino context and elimination of language barriers. Psychometric properties of tools also need to be evaluated after adaptation because properties such as reliability and validity are not always retained during the translation [12].

From the array of tools available, the Attitude to Disability Scale (ADS) by Power, Green, and the WHO Quality of Life (WHOQOL) Disability Group was found to be a promising tool to be adapted for the Philippine setting because it was developed with the intention of cross-cultural use [13]. A participatory approach was also used for its construction, drawing insights from personal experiences of PWDs, families, caregivers, and experts, supported by a rigorous literature review [13]. It has also demonstrated adequate overall utility with good internal consistency ($\alpha = 0.79$) and a four-factor correlated model structure (CFI = 0.914, NFI = 0.908, RMSEA = 0.060, $\chi 2 = 2817.0$, d.f. = 198, $P<0.001$) [11,13]. Moreover, ADS has been translated and used in other cultures [14,15] which can potentially allow cross-cultural comparison.

The ADS has sixteen items representing four subscales, namely, Inclusion (items 1, 2, 5, and 6), Discrimination (items 3, 4, 11, and 12), Gains (items 7 to 10), and Prospects (items 13 to 16) [13]. The Inclusion subscale items reflect the participation and roles of PWDs in society [13]. The items under the Discrimination subscale reflect society's negative behavior towards PWDs [13]. The Gains subscale items pertain to positive outlook on having disability, and the Prospect subscale items reflect perceived abilities of and opportunities for PWDs[13].

The ADS has two forms: the personal form and the general form. The personal form is made for PWDs to measure their attitudes towards their own disability, while the general form is designed for both PWDs and the general population to measure their attitudes towards disability in general [13]. PWDs may answer both forms or only the personal form. Each form has two versions: for physical disability and intellectual disability. Respondents' extent of agreement with each item is rated using a 5-point Likert scale for the physical disability forms (Strongly disagree = 1, Strongly agree = 5) and a 3-point Likert scale for the intellectual disability form (Disagree = 1, Agree = 3). Only the scale responses differ between the physical disability forms and the intellectual disability forms. The ADS forms also have an accompanying demographic questionnaire, which includes items on living circumstances, education, health status, disability status, and income. Self-report is the preferred method of administering the tool, and administration through a proxy is not allowed [13].

Therefore, given the importance of measuring attitudes towards disability using a culturally appropriate instrument, this study aimed to culturally adapt the ADS forms to Filipino and evaluate the reliability of the adapted forms.

Methodology

This was a descriptive exploratory study of the cross-cultural adaptation of ADS physical disability forms to Filipino and the reliability testing of the adapted version. This study obtained ethical clearance from the University of the Philippines Manila Research Ethics Board (UPM REB No. 2014-501-01). Informed consent was obtained from all respondents prior to their participation in the study.

Cultural Adaptation of the ADS to Filipino

An integration of the guidelines for cross-cultural adaptation by Beaton *et al.* and the WHO were used for this study [12,16]. The process involved (1) forward translation, (2) synthesis of translations, (3) backward translation, (4) expert committee review, (5) pretesting and cognitive interviewing, and (6) refinement for the final version. Figure 1 shows a diagram of the translation and cultural adaptation process. Consent from the original developers of ADS was obtained prior to culturally adapting the forms to Filipino. Both physical and intellectual disability versions of the forms were included during the cultural adaptation process since they contain the same items and only differ in response scales. Modification recommendations for the adapted ADS intellectual disability forms were used to refine the adapted physical disability forms, and vice versa.

Forward Translation and Synthesis of Translations

Two translators independently translated the original ADS forms (both physical and intellectual disability forms) to Filipino. Both translators were fluent in English but considered Filipino as their mother tongue. One translator was familiar with the concepts and terms used in the forms and was invited to better reflect the technical aspect of the questionnaire. The other translator was neither aware nor informed of the

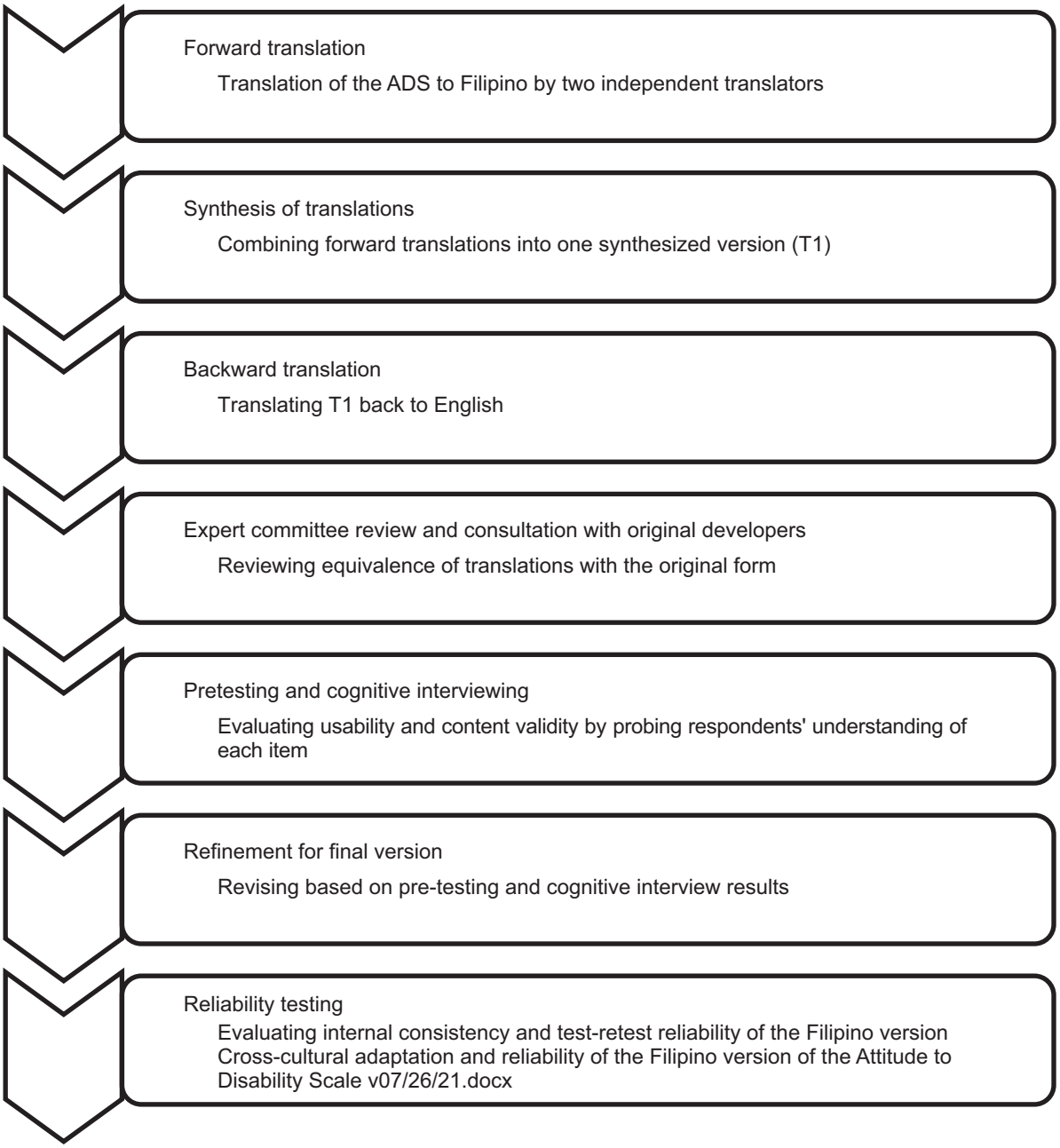

Figure 1. *Stages of the cultural adaptation process*

concepts of the tool and was invited to better reflect the language used by the general public. After forward translation, both forward translators worked together to agree on a synthesized version (output referred to as T1). Inconsistencies and ambiguities, both in meaning and word choices, were identified and resolved through consensus.

Backward Translation

Another pair of translators independently translated T1 back to English to ensure that the translated version was equivalent to the original version [12]. Both back translators have English as their primary language and were also fluent in Filipino. They had no knowledge of the concepts used in the forms and were not familiar with the original form. This was to ensure unbiased backward translation.

Expert Committee Review

An expert committee was formed to review the forward and backward translations for equivalence and to reach a consensus for the pre-final version of the forms for

pretesting. The committee consisted of health professionals and PWD advocates, linguists, and all four translators. Semantic, experiential, and conceptual equivalence were considered through a consensus from all members of the expert committee following in-depth discussion. All aspects of the forms, including the demographic questionnaire, instructions, items, choices, and format were examined. One of the original developers of the ADS was also consulted during this stage to check the back translations for semantic equivalence and clarify the intended meaning of some words in the ADS. The research team documented points of discussion and decisions in resolving conflicts.

Pretesting, Cognitive Interviewing, and Refinement of the Final Version

The pre-final version of the forms was pretested through self-administration among a sample of the target respondents, which consisted of members of the general adult population and PWDs. This was immediately followed by cognitive interviews with the same pretesting participants. As the intellectual disability forms were also culturally adapted, pretesting also included persons with mild to moderate intellectual disability. PWDs were asked to answer both personal and general forms. Those with physical disability only answered the physical disability forms while those with mild to moderate intellectual disability answered the intellectual disability forms. People with severe intellectual disability were excluded from the pre-testing. Those without disability were asked to answer the general form only. After answering the form/s, each respondent was interviewed by a researcher about his/her understanding of the tool. Interview questions focused on capturing the respondents' understanding of items and corresponding responses. Respondents were also asked whether they found the instructions and format appropriate and user-friendly. The interviews were recorded and later transcribed. Results from this procedure were considered in further revisions to the translated forms (Fil-ADS). The final versions of the physical disability forms were then field-tested for reliability measures.

Reliability Testing of the Fil-ADS Physical Disability Forms

There were two phases of data collection to allow for the evaluation of the test-retest reliability of the Fil-ADS physical disability forms. Data from the first phase of reliability testing were also used for measuring internal consistency. The second phase was done one to two weeks after initial data collection. One to two weeks is the recommended time interval for reliability studies and is a reasonable timeframe given the lability of attitudes as the construct being measured [17].

The respondents were asked to accomplish the Fil-ADS physical disability forms according to their own understanding of the contents. Another person was only allowed to read the contents and write the answers for respondents who were unable to read or write but they were not allowed to provide assistance in understanding its contents nor in providing a response.

Respondents

Convenience sampling was used to recruit respondents. Respondents recruited for the personal form were persons living with a physical disability. For the general form, respondents were members of the general adult population who may or may not have a physical disability. All respondents were at least 18 years old and able to understand the contents of the forms for self-administration. Physical disability is operationally defined in this study as total or partial loss of body function influenced by personal and environmental factors resulting in difficulty in movement, mobility, and/or performance of daily activities [16]. Persons with intellectual disabilities and/or moderate to severe cognitive deficits were excluded from the reliability testing. Respondents were recruited from outpatient clinics, schools, and communities in Metro Manila and nearby provinces. Only Filipino citizens were recruited for the study because the tool was translated to the Filipino language and culture. At least 50 participants were targeted for assessing the reliability of each form [12] to ensure that selection bias is avoided given the probability of the sampling method.

Data Analysis

Microsoft Excel software and IBM SPSS Statistics software [18] were used to analyze the data acquired. Data from the Likert scale were treated as interval data [19]. The population of the respondents was described using frequency distributions, means, and standard deviations (SD). Internal consistency for each form and their subscales were measured using Cronbach's alpha coefficient (α). Values with >0.75 have good reliability, 0.50 to 0.75 have moderate reliability, and <0.5 have poor reliability[20]. Supporting analysis, *i.e*. Corrected Item-Total Correlation (CITC) and Cronbach's Alpha if item deleted, were also computed. CITC is an item's correlation to the summated scores of all other items while Cronbach's Alpha, if item deleted, indicates the Cronbach's Alpha coefficient if an item is to be deleted from a scale [21]. Acceptable CITC values should at least be 0.40 [21].

Test-retest reliability for each form and their subscales were analyzed using Intraclass Correlation Coefficient (ICC) [22,23].

Since the respondents were selected from a larger population of people with similar characteristics and the agreement was measured between test and retest responses of each respondent, the researchers used a 2-way mixed effects, single measurement, absolute agreement model (ICC 2,1) to calculate for ICC estimates and their 95% confidence interval (95%CI) [20,22–25]. ICC values were interpreted using the general guidelines also used for Cronbach's alpha coefficient [20,22].

Results

Cultural Adaptation of the Fil-ADS

Twelve respondents participated in the pretesting of the forms. Time and logistic constraints limited the number of respondents for pretesting to 12 instead of the targeted 30 respondents [12]. However, the researchers deemed that data saturation has been reached with 12 respondents when responses in cognitive interviewing became repetitive. Table 1 contains the characteristics of the pretesting respondents.

After a review of discussions of the expert committee and thematic analysis of the cognitive interview responses, three main factors in the cultural adaptation of the ADS was considered: using conversational language, avoiding use of terms deemed as derogatory, and replacing terms with words that are more appropriate to the Filipino context. Literal translations of some terms to Filipino were deemed too technical by the expert panel committee and were revised to more conversational terms to make the tool more readily understandable to the general public. An example was the use of "*sukat*" rather than "*iskala*" for the term "scale".

Table 1. *Demographic Information of Respondents for Cognitive Interview*

	Respondents for cognitive interview (n=12)
Age range (in years)	20 - 61
Gender	
Female	7 (58.33%)
Male	5 (41.67%)
Type of respondent	
With physical disability	6 (50%)
With intellectual disability	4 (33.33%)
From general population	2 (16.67%)
Educational attainment	
College/University	5 (41.67%)
Secondary/High school	2 (16.67%)
SpED	1 (8.33%)
Primary school	1 (8.33%)
Others	3 (25%)

Another example was the choice to use "nakatira sa" rather than "naninirahan sa" for the translation of the phrase "living in".

Some English terms were also retained as they were deemed to be more understandable than their direct translations to Filipino such as "self-employed" and "sex". There were also literal translations considered demeaning and with negative connotations within the Filipino society, such as "may kapansanan sa pag-iisip" for "intellectual disability" and were therefore retained in their original English form. Some terms, such as "community care/sheltered housing" were also deemed not appropriate as such facilities are not readily available in the country or are not widely known. These options were changed to terms that were more relatable to Filipinos, such as "Department of Social Welfare and Development (DSWD) centers".

Comments from the cognitive interview also resulted in revisions of the instrument format to serve as a better visual guide for the instructions. These changes included indentation of follow-up questions, use of bold font for emphasis, and use of italics for side notes. The five-point Likert scale was also retained to keep the original scoring of the tool but the choices for each item were indicated in words instead of numbers as these were noted to be confusing to some respondents. Further, some terms identified by the respondents to have various interpretations were given examples or brief explanations on the side such as "TESDA" for vocational courses. Some terms in the demographic questionnaire were also modified to be more inclusive in terms of the possible answers as suggested by the cognitive interview respondents. An example is the inclusion of "self-employed" as an occupation. Instructions deemed by the respondents as too long were also modified for brevity and items with double negative phrases were reconstructed to improve understandability. The use of symbols, like the smiley faces, was also retained since most respondents in the cognitive interview deemed them helpful in making the Likert scale easy to understand.

Reliability of the Fil-ADS General and Personal Physical Disability Forms

Seventy-five respondents accomplished the personal form, 36 of whom participated in the retest, and 287 respondents completed the general form, 61 of whom participated in the retest. The decreased participation for retesting was due to the unwillingness or unavailability of some respondents to further participate in the study. Table 2 details the characteristics of the respondents for field testing while Table 3 details the

Table 2. *Demographic Information of Respondents for Field Testing*

	Fil-ADS Personal form (n=75)	Fil-ADS General form (n=287)
Mean age ± SD	48.74 ± 14.64	33.08 ± 14.39
Gender		
Female	35 (46.67%)	212 (73.87%)
Male	37 (49.33%)	64 (22.30%)
Others	3 (4%)	11 (3.83%)
Civil status		
Single	19 (25.33%)	133 (46.34%)
Married	37 (49.33%)	109 (37.98%)
Others	19 (25.33%)	45 (15.68%)
Education		
High School Graduate	21 (28.00%)	142 (49.48%)
College Graduate	11 (14.67%)	82 (28.57%)
Elementary Graduate	19 (25.33%)	15 (5.23%)
Others	24 (32%)	48 (16.72%)
Health status		
With Disability	65 (86.67 %)	45 (15.68%)
With Health Conditions	7 (9.33%)	55 (19.16%)
Occupation		
Education	3 (4.00%)	101 (35.19%)
Employed	1 (1.33%)	60 (20.91%)
Home-based	22 (29.33%)	53 (18.47%)
Unemployed, currently looking for work	23 (30.67%)	12 (4.18%)
Self-employed	7 (9.33%)	16 (5.57%)
Others	19 (25.33%)	45 (15.68%)
Financial status		
Well above average	3 (4.00%)	6 (2.09%)
Slight above average	0 (0%)	53 (18.47%)
Average	37 (49.33%)	173 (60.28%)
Slight below average	19 (25.33%)	25 (8.71%)
Well below average	9 (12.00%)	11 (3.83%)
Did not determine	7 (9.33%)	19 (6.62%)

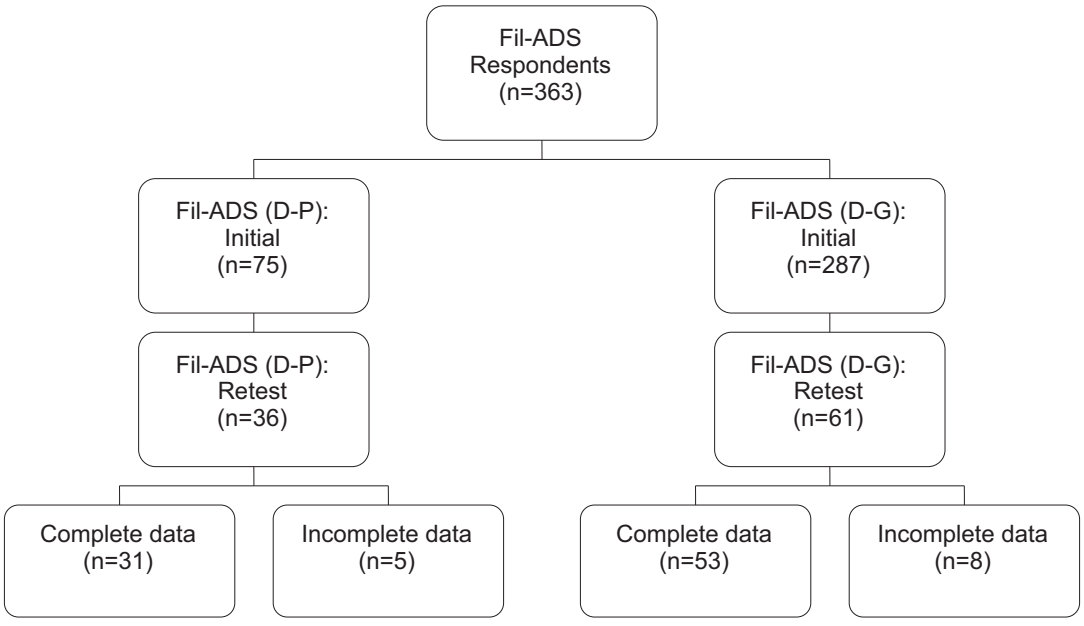

Figure 2. *Number of respondents for each phase of data collection*

Table 3. *Demographic Information of Respondents for Retesting*

	Fil-ADS Personal form (n=36)	Fil-ADS General form (n=61)
Mean age ± SD	55.74 ± 11.39	42 ± 14.13
Gender		
Female	10 (27.78%)	45 (73.8%)
Male	24 (66.67%)	16 (26.2%)
Others	2 (7.41%)	0 (0%)
Civil status		
Single	6 (16.67%)	12 (19.7%)
Married	21 (58.33%)	38 (62.3%)
Co-inhabiting	1 (2.78%)	5 (8.2%)
Separated	2 (5.56%)	3 (4.9%)
Widowed	4 (11.11%)	3 (4.9%)
Others	2 (5.56%)	0 (0%)
Education		
High School Graduate	8 (22.22%)	26 (42.6%)
College Graduate	7 (19.44%)	19 (31.1%)
Elementary Graduate	10 (27.78%)	5 (8.2%)
Vocational School Graduate	4 (11.11%)	6 (9.8%)
Others	7 (19.44%)	5 (8.2%)
Health status		
With Disability	32 (88.89%)	18 (29.5%)
With Health Conditions	28 (77.78%)	14 (23%)
Occupation		
Self-employed	7 (19.44%)	7 (11.5%)
Education	0 (0%)	7 (11.5%)
Unemployed, currently looking for work	14 (38.89%)	5 (8.2%)
Voluntary work	2 (5.56%)	5 (8.2%)
Retired	0 (0%)	5 (8.2%)
Employed	1 (2.78%)	4 (6.6%)
Home-based	4 (11.11%)	25 (41%)
Others	8 (22.22%)	2 (3.3%)
Financial status		
Well above average	1 (2.78%)	2 (3.3%)
Slight above average	1 (2.78%)	9 (14.8%)
Average	19 (52.78%)	40 (65.6%)
Slight below average	9 (25.00%)	7 (11.5%)
Well below average	3 (8.33%)	2 (3.3%)
Did not determine	3 (8.33%)	1 (1.6%)

Table 4. *Overall and Per Subscale Internal Consistency of the Original ADS Form and the Fil-ADS forms*

	Fil-ADS Personal form	Fil-ADS General form
Overall α	.81	.78
Per subscale α		
Inclusion	.82	.71
Discrimination	.80	.67
Gains	.79	.73
Prospects	.78	.81

characteristics of the respondents for retesting. Figure 2 shows the number of respondents in each phase of data collection.

The average Fil-ADS personal form total score was 48.01 ± 9.99 and the mean Fil-ADS general form total score was 52 ± 9. These indicated a relatively positive attitude of the respondents towards disability. Table 4 details the overall and per subscale internal consistency of the forms. The overall internal consistency of both forms signifies good reliability. The internal consistency per subscale also indicates moderate to good reliability. Some items (items 7-10 for the personal form and items 2-4 and 7-11 for the general form) have CITC values lower than 0.40. Cronbach's Alpha coefficient also increased if items 7-10 for the personal form and items 7-9 for the general form are deleted. Table 5 details each item's CITC and Cronbach's alpha if item was deleted.

Table 6 details the test-retest reliability estimates of the forms and each subscale using ICC estimates and 95%CI.

Table 5. *Corrected Item-Total Correlation and Cronbach's Alpha if Item Deleted for Individual Items of the Fil-ADS Forms*

	Fil-ADS Personal form		Fil-ADS General form	
	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q1	.53	.795	.47	.757
Q2	.59	.791	.29	.771
Q3	.58	.792	.18	.780
Q4	.55	.794	.18	.780
Q5	.60	.790	.59	.743
Q6	.67	.784	.59	.744
Q7	-.10	.832	.05	.787
Q8	-.12	.832	.11	.782
Q9	-.04	.830	.10	.782
Q10	-.18	.837	.20	.776
Q11	.50	.798	.36	.766
Q12	.72	.781	.59	.747
Q13	.70	.783	.53	.750
Q14	.52	.796	.44	.759
Q15	.62	.789	.58	.745
Q16	.47	.799	.48	.756

Table 6. *Overall and Per Subscale Test-Retest reliability Analysis of the Fil-ADS Forms*

	Fil-ADS Personal form	Fil-ADS General form
Overall ICC (95%CI)	.446 (.136, .674)	.220 (-.035, .447)
Per subscale ICC (95%CI)		
Inclusion	.522 (.239, .724)	.284 (.039, .497)
Discrimination	.507 (.219, .714)	.457 (.231, .634)
Gains	.624 (.378, .788)	.705 (.551, .812)
Prospects	.320 (.004, .581)	.381 (.144, .577)

Overall, results show that both the personal and general forms have poor test-retest reliability, with the personal form showing relatively better estimates. Most of the subscales have poor to moderate reliability; however, the lowest ICC estimates are seen in the personal form's Prospects subscale and the general form's Inclusion subscale. Moderate to good reliability values are seen in the general form's Gains subscale.

Discussion

This study aimed to culturally adapt the Attitude to Disability Scale physical forms to Filipino and assess the reliability of the adapted version. After careful cultural adaptation and consideration of the semantic and conceptual equivalence with the original ADS, results show that the translated and adapted forms demonstrated good internal consistency but poor to moderate test-retest reliability.

The good internal consistency measures of the Fil-ADS physical disability forms denote interrelatedness of the items without unnecessary redundancy between them. These values are also commensurate to the internal consistency measures of the original ADS which has Cronbach's α of 0.795 [13] and the Brazilian version which has a Cronbach's α of 0.76 [14]. The internal consistency of the subscales of the Fil-ADS is also comparable to the original ADS [13] and to the Brazilian version [14]. This implies that the process undergone to culturally adapt ADS to Filipino helped retain the relatedness of the items and subscales of the tool.

Cronbach's alpha if item deleted showed that removing some items, including items 7-10 for the personal form and items 7-9 for the general form, will improve the internal consistency of the forms. These items also have low values of CITC and thereby, low correlation to the other items. However, the research group decided to keep them to retain the equivalence of items with the original form and facilitate comparison of Fil-ADS data with other translations of the instrument. Nevertheless, the overall internal consistency for both forms is still acceptable whether the items are deleted or not. This is also comparable with the reliability testing results of Power *et al.* [13] which showed low item-total correlated values for items 7-10 (Gains subscale). This is attributed to the Gains subscale forming a clear and separate subscale [13].

The poor to moderate ICC estimates and, therefore, test-retest reliability of the Fil-ADS physical disability forms could possibly be attributed to the distribution of responses [26]. As an inferential test, ICC is highly influenced by the variance of samples [26], with more homogenous samples having lower ICC [20,23]. To better understand the poor ICC estimates of our adapted forms, data for the distribution of responses was investigated. While the sample has shown to have significant

variability, most items with estimates and confidence intervals falling in the poor values of reliability have variability nearing non-significance, showing that the sample is nearing homogeneity. This is also reflected in the convex distribution of our data. Mehta *et al.* [26] recommended a sample selection procedure to decrease the impact of study design and sampling on ICC by ensuring a uniform distribution of subjects.

Moreover, the subjectivity of the items, required responses, and the varying self-administration conditions between test and retest may have affected the test-retest reliability. Factors such as recent experiences with PWDs and social interrelations are potential influences on one's responses [15,27,28]. A person's attitude is also influenced by the information available in the environment and context they were in during testing [29]. The respondents may have been influenced particularly by the people around them during the administration of the form. It has been suggested that individuals modify their judgments and responses to match those who are around them [30]. They also tend to deliberate more carefully if they are in the presence of other people who can easily learn about their responses as they feel more accountable to their answers [28]. The different environmental and social contexts, such as being around a PWD during initial data collection or retest, may also have influenced the respondents' answers [29].

This study shows that the Fil-ADS physical disability forms may be used to generate reliable data based on the internal consistency of the forms to evaluate and better understand the Filipinos' attitudes toward disability. It could provide information that can build awareness and inform various endeavours to address social stigma against PWDs and monitor and evaluate the impact of services aimed to improve the quality of life of PWDs. As an example, the forms are currently used by the Community Rehabilitation Program of the University of the Philippines Manila, College of Allied Medical Professions to measure the community member's attitudes towards disability for project planning and monitoring of project outcomes. Results from the forms may also be used to compare attitudes across different cultures as ADS was cross-culturally developed by WHOQOL and has been adapted to other cultures [14,15]. However, its structural validity needs to be evaluated to further assure its comparability with ADS and further strengthen its utility.

This study has some limitations. With the sampling method and coverage, results may not be generalized to Filipinos from other regions. Although the population of Metro Manila includes individuals from various regions in the country, the sample size may not be adequate to assume acceptable representation. The sample distribution to the scale may also have affected test-reliability measures. Further studies with a wider sampling frame to allow better distribution of responses could further ascertain the test-retest reliability of the Fil-ADS physical disability forms.

Conclusion

The ADS was culturally adapted to Filipino to ensure appropriateness for use in determining attitudes towards disability in the Philippine context which often affects the quality of life of PWDs. This process resulted in the development of the Fil-ADS physical disability forms. The Fil-ADS physical disability forms had demonstrated good internal consistency, which suggests homogeneity of items. The forms have also shown some ability to produce consistent results, but further studies with better sampling are needed to further establish this. These forms can be used to reliably measure attitudes toward disability of Filipinos; however, further studies are also recommended to ascertain its validity.

Note: The use of "PWDs" is only for formatting purposes and is not intended to label or limit the identity of persons with disabilities through the use of such initialisms.

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