

Report on the Welsh linguistic validation of the ArmA measure

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Introduction

Stroke measures are increasingly used in the Welsh NHS to help monitor patients' health status in order to organise treatment. In the bilingual context of Wales, health questionnaires are required in Welsh as well as English. The Language Awareness Infrastructure Support Service (LLAIS), based at NWORD, Bangor University, is tasked with increasing the availability and accessibility of Welsh language versions of health measures for Health and Care Research Wales.

Linguistically validating a measure into Welsh is a long process. There has to be parity of meaning, and group comparisons should reflect true group differences rather than linguistic discrepancies or cultural bias in translation. The Arm Activity Measure (ArmA) (Ashford et al., 2013) was one of three Stroke measures to be linguistically validated into Welsh for clinicians at Betsi Cadwaladr University Health Board (BCUHB). The other two measures were the Leg Activity Measure (LegA) (Ashford et al., 2017) and the Stroke Impact Scale. (Duncan et al., 2003).

Aims and objectives of Arm-A Welsh linguistic validation

To prioritise and establish a Welsh language version of the ArmA outcome measure through:

- Undertaking the translation and linguistic validation of a Welsh language version of the ArmA measure to benefit the clinical as well as research context
- Making the Welsh version of the ArmA measure available on the interactive web resource, MI-Cym (Mesurau Iechyd Cymraeg/ Welsh Health Measures) <http://micym.org/llais/static/index.html>, to aid accessibility for clinicians and researchers.

Findings

As well as professional translators, a language terminologist, and healthcare professionals, seven members of the RHOI LLAIS database gave their opinion on a version of the Welsh language ArmA in focus group sessions to ensure clarity of the questions. Changes were made to the wording based on these discussions and final comments from LLAIS and the language terminologist. Example changes:

Question	Pre-final version (Welsh)	English translation	Final version (Welsh)	English translation	Comment
Short title of Arm Activity Measure – ArmA	BraichA	ArmA	BraichG	ArmG	The short title of BraichG is more correct because the 'A' stands for 'Activity'. 'Gweithgaredd' is the Welsh word for 'activity', therefore 'Mesur Gweithgaredd Braich'/Arm Activity Measure, can be shortened to BraichG in Welsh.
1.	Anhawster gyda cadw cydbwysedd wrth gerdded oherwydd eich braich.	Difficulty with balance when walking due to your arm	Anhawster gyda cadw cydbwysedd / balans wrth gerdded oherwydd eich braich.	Difficulty with balance when walking due to your arm	Accept the inclusion of the word 'balans' because it is more widely used than 'cydbwysedd', which may not be a familiar word to some Welsh speakers.
13.	Defnyddio allwedd i agor y drws. Suggestion to add the Northern and Southern Welsh word for 'key'. Allwedd is the formal word that should be used, but people in North Wales say 'goriad' for 'agoriad' (the thing that will open something).	Using a key to open the door.	Defnyddio gorriad/allwedd i agor y drws.	Using a key (North Wales term)/key (South Wales term) to open the door.	Acceptable to use both North Walian and South Walian terms (gorriad/allwedd (key) here to make it understandable to everyone in Wales.

Conclusion

Since March 2020, the Welsh version of the ArmA (Braich G) has been available for practitioners and researchers to use in Wales. It is hoped that this free to use tool will be of benefit in designing treatment for Welsh speaking Stroke survivors in Wales. The LLAIS linguistic validation work makes significant contribution towards establishing robust systems to ensure conduct and delivery of clinical trials of the highest quality that meet regulatory and governance requirements whilst advancing methodological approaches of international significance. To date, 46 outcome measures are listed on the micym.org website and around 43 of these have been linguistically validated by LLAIS, NWORD Trials Unit with hugely appreciated support and contribution from the members of the RHOI LLAIS database (see <http://nworth-ctu.bangor.ac.uk/llais/rhoi-llais.php.en>).

Methods

This study focuses exclusively on a step by step systematic approach to the linguistic validation of the Welsh language version of the Arm Activity Measure (ArmA) questionnaire used by Stroke Services in the NHS in England and Wales (see Wild et al., (2005) and also micym.org <http://www.micym.org/llais/static/translations.html> for more details on the translation guidelines including forward and back translation, consensus review and cognitive testing).



Members of RHOI LLAIS (LLAIS Public representatives) giving their opinion on a version of the Arm Activity Measure during one of the focus group sessions.



Logo of the micym.org website



Please follow @micymraeg for up to date information on Welsh measures.

References

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