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EDAQ

Evaluation of Daily Activity Questionnaire:

User Manual v3



The Evaluation of Daily Activity Questionnaire (EDAQ) User Manual: Version 3

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The English version of the EDAQ was adapted from the Swedish EDAQ developed by Ulla Nordenskiöld PhD. The Dutch and German versions of the EDAQ were translated from the English EDAQ.

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Obtaining the English EDAQ, EDAQ Manual, Manual Supplements and support materials:

The two forms of the Evaluation of Daily Activity Questionnaire (EDAQ: i.e. including Parts 1 and 2; **or** Parts 1,2 and 3); the EDAQ Manual v2 (and any updated versions and supplements); a leaflet for people with arthritis and EDAQ data entry forms are available for download at:

<http://usir.salford.ac.uk/view/authors/10108.html#group>

Look under “Monographs” for the latest versions and Dutch and German versions of the EDAQ.

Publications related to the EDAQ are located under “Articles.”

See also: www.profalisonhammond.com

Table of Contents

1 Introduction	1
2 What does the EDAQ include?	3
3 How long does it take to complete the EDAQ?	4
4 Who is it for?	5
5 What do people with arthritis/ MSCs and occupational therapists think about the EDAQ?	6
6 How can I use the EDAQ in clinical practice?	8
7 How do I score the EDAQ?	9
8 What do I do with the EDAQ scores?	11
9 How can I use the EDAQ in research?	12
10 How do I analyse EDAQ data in research and audit?	12
11 How do I obtain the EDAQ, updated EDAQ manuals, manual supplement(s) and data entry files?	14
12 Can I use the EDAQ for free?	15
References	16
Appendix 1: How to Score the EDAQ Part 2: Example.	18
Appendix 2: Table 1 How to interpret EDAQ scores	24
Appendix 3: EDAQ Spider Chart plus example	25
Appendix 4: Reliability and validity of domains 13 and 14 (Caring and Hobbies) in MSCs	28
Appendix 5: For research use only: Guidelines for coding/ scoring EDAQ Part 2 data in SPSS or other statistical packages; Rasch transformation instructions for the EDAQ Part 2	31

1. Introduction

The Evaluation of Daily Activity Questionnaire (EDAQ) is a self-report assessment. It evaluates, in detail, a person's daily activity abilities with and without using ergonomic solutions (i.e. using alternate movements and positions, activity simplification, pacing, planning, assistive devices, gadgets and equipment) or help. It includes numeric rating scales evaluating impact of conditions on e.g. pain, fatigue, mood and also 138 activities within 14 domains (sub-scales). In clinical practice, the EDAQ provides detailed assessment of and enables treatment planning for activity limitations. It can also be used for outcome measurement. It has been psychometrically tested in arthritis and musculoskeletal conditions (MSCs).

The EDAQ was originally developed and partially tested in the mid-1990's with women with rheumatoid arthritis (RA) in Sweden (Nordenskiöld et al. 1996, 1998), where it is used clinically and for clinical and epidemiological research (Cederlund et al, 2001, 2007; Sandqvist et al, 2004; Thyberg et al, 2004, 2005).

We translated the EDAQ into English using standard methods (Beaton et al, 2000). People with a range of arthritis and MSCs in the UK contributed to its' cross-cultural adaptation by identifying the commonest activity limitations they experience. They decided which activities to include and omit. This ensured content validity and that the EDAQ is relevant and important to people with arthritis and MSCs, as well as including relevant activities for the 2010's (Hammond et al, 2014; 2015a). Rheumatology occupational therapists also contributed to identifying which activities should be included (Hammond et al, 2015a). Content validity has been further evaluated by using International Classification of Functioning, Disability and Health (ICF) linking rules to link the EDAQ with: the ICF chapters of Body Functions, Activities, Participation and Environment (World Health Organisation, 2001) and relevant ICF Core Sets for RA, ankylosing spondylitis (AS), chronic widespread pain, low back pain, osteoarthritis (OA) and MSCs for post-acute care (Hammond et al, 2014; 2015a).

The EDAQ was psychometrically tested in:

- Rheumatoid Arthritis (RA)
- Osteoarthritis (OA)
- Ankylosing Spondylitis (AS)
- Systemic Lupus Erythematosus (SLE)
- Systemic Sclerosis (SS)
- Chronic Pain (CP): i.e. including back pain, neck pain, chronic widespread pain, fibromyalgia
- Chronic upper limb disorders (CULD): including, for example, carpal tunnel syndrome, Dupuytren's contracture, de Quervain's, shoulder and elbow conditions
- Primary Sjögren's Syndrome (PSS).

(Hammond et al, 2015b; Hammond et al, 2016).

The EDAQ was originally designed as an Occupational Therapy assessment for clinical practice, audit and research. It can also be used to evaluate Physiotherapy practice and research, as it includes both activity and mobility limitations. Additionally, the EDAQ can be used to evaluate the effects of multidisciplinary rehabilitation, self-management education, and pharmacological interventions, if a more detailed activity/mobility assessment is required.

For all uses, it is normally completed by the person in their own time, usually at home.

The person can take breaks or do this over a couple of days if they wish. This allows people time for reflection on abilities and what they want help with, as well as avoiding tiredness whilst filling it in. By completing it in advance at home, less time is spent later during therapy appointments identifying problems, allowing more time to focus on solutions. The EDAQ facilitates collaboration between the person with arthritis/ MSCs and therapist.

The EDAQ is available in English, Dutch and German. Please contact the lead author for further information about ongoing publications in the above conditions and languages.

2. What does the EDAQ include?

The EDAQ includes three parts:

Part 1: evaluates common effects of arthritis/MSCs. 10 numeric rating scales evaluate: mood, pain when resting, pain when moving, stiffness, limitations in joint movement, fatigue, worry, sleep problems, and satisfaction with life.

Part 2: evaluates 138 daily activities. There are 14 domains (or sub-scales):

1. Eating /Drinking
2. In the Bathroom/ Personal Care
3. Getting Dressed/ Undressed
4. Bathing/ Showering
5. Cooking
6. Moving Around Indoors
7. Cleaning the House
8. Laundry / Clothes Care
9. Moving and Transfers
10. Communication
11. Moving Around Outside/ Shopping
12. Gardening/ Household Maintenance
13. Caring
14. Hobbies, Leisure and Social Activities.

The last three domains were developed and added to the English EDAQ following feedback from people with arthritis that these should be included. Each domain is split into:

Section A: asks ability **without** using ergonomic methods (i.e. alternative methods: joint protection, such as: using different movement patterns and positioning; pacing; planning; task simplification; assistive devices, aids and gadgets) or help.

Section B: asks ability **with** ergonomic methods; and to describe the method used.

Part 3 *Optional*: asks about opinions and use of common assistive devices. This part is not essential and has not been psychometrically tested.

Finally: five questions ask about: use of orthoses; which assistive devices are valued most; attitudes to using assistive devices; actions taken to self-manage arthritis; and the most important thing the person wishes to continue to do.

Two forms of the EDAQ are available: with and without Part 3. Normally, only parts 1 and 2 are used, unless information about assistive device use is essential.

The English EDAQ (parts 1 and 2) is available at: <http://usir.salford.ac.uk/30755/>

The English EDAQ (parts 1,2 and 3) is available at: <http://usir.salford.ac.uk/30754/>

There is also a leaflet (in English) explaining about the EDAQ for people with arthritis and MSCs.

The Dutch EDAQ (parts 1 and 2) is available at: <http://usir.salford.ac.uk/46269/>.

The German EDAQ (parts 1 and 2) is available at: <http://usir.salford.ac.uk/46276>

The Swiss-German EDAQ is available at: <http://usir.salford.ac.uk/46275>

3. How long does it take to complete the EDAQ?

This will vary with, for example, the person's level of:

- Pain
- Fatigue
- Hand function
- Concentration
- As well as the number of difficult activities they have, as the person records alternate methods/ assistive devices/ gadgets used in Part 2 Section B.

During testing of the full EDAQ (i.e. parts 1, 2 and 3), the time taken varied from 18 to 78 minutes (median 40, IQR 28 – 59 minutes). To complete the revised EDAQ, i.e. just parts 1 and 2, takes most people about 25 to 30 minutes. Consequently, people should take the EDAQ home to complete in their own time. This allows reflection on abilities and avoids them feeling pressurised to complete it quickly. It has not been tested as an interview.

Whilst 25-30 minutes seems a long time, during the development phase people with MSCs considered it important that the EDAQ is comprehensive, in order to effectively identify their problems. Over 85% of the, approximately, 1800 involved in testing the EDAQ considered this acceptable. (See section 5).

4. Who is it for?

The EDAQ can be used in a wide range of MSCs (see page 2).

In psychometric testing, about 80% of eligible patients with these eight conditions consented to take part, most of whom then completed the EDAQ. Of those unwilling to take part, reasons were: not wanting to take part in research; too ill; family members unwell; too busy; and, a few, did not like long questionnaires. Clinically, this suggests some two-thirds of people with one of these eight conditions, or more, would be willing and able to complete the EDAQ. The EDAQ is NOT for everyone. Some people have insufficient reading ability, concentration or desire to complete questionnaires. The reading age of the EDAQ is between 11-12 years.

During testing in RA, we found only 8% of people requested additional verbal instructions in how to complete the EDAQ (over and above the written instructions already included within the EDAQ). This group were more likely to have severe activity limitations and/ or poorer quality of life. (Lower educational attainment was not related to requiring help). Following additional instructions, this group were just as able to complete the EDAQ as those not receiving verbal instructions.

If people are clinically depressed and have more severe difficulties, please consider the appropriateness of asking them to complete the EDAQ, as completion may heighten their awareness of difficulties. If it is appropriate to complete it, emphasise to them how it will assist them and you to collaboratively identify solutions.

5. What do people with arthritis/ MSCs and occupational therapists think about the EDAQ?

In our studies, over 80% of people with these eight conditions considered the EDAQ would be helpful or very helpful for discussing everyday problems with an occupational therapist. Most (85%) replied it had about the right amount of activities.

Comments from people with these eight conditions about clarity of instructions, layout and length of the EDAQ included (Hammond et al, 2014; 2015a):

“It was very thorough and would be good for outlining level of difficulty and needs. It’s easy once you read the instructions carefully.” (69 year old man with RA for 10 years).

“It’s easy once you get used to it. It might look a bit daunting to some people and feel too much at first. But it’s OK once you get used to it.” (45 year old man with AS for 10 years).

“It’s set out quite nice. It’s not difficult, it’s easy to do. I didn’t have to write much, just tick, as I have difficulty writing. It was easy to follow.” (60 year old woman with FM for 20 years).

“At first I thought “Crikey, there are a lot of questions.” But when I read it through, I thought all of it was relevant. It’s easy to go through; I don’t have problems with it being longer. (54 year old woman with AS for 24 years).

Fibromyalgia affects you in many ways....it [the EDAQ] gives a good overall picture and you couldn’t do it in less. You look at it and think “Oh, it’s long” but if you keep going back to it, it’s OK, it will help you.” (62 year old woman with FM for 5 years).

“...you might get some who say it is too long. But it’s a good basis for assessment. It didn’t take me too long: I did it in two sessions for about 30 minutes altogether and I re-read it.” (63 year old woman with SS for 7 years).

Comments also indicated the insights completing the EDAQ gave to them and their partners, for example:

“I preferred filling it in at home. I did it over a weekend so I could think about it. My partner helped me. I think it helped him to understand my problems better too. “ (60 year old woman with FM for 20 years).

“For me it was informative... as it made me think that there could be solutions then. There could be lots of things to help. It helps to kind of advertise that there are solutions then, so it’s all relevant... The EDAQ helps concentrate your thoughts and understand your illness more. This has helped me to focus on things and try to live differently to cope with life.... At first, I thought a lot of this doesn’t apply to me. But it does when you think about the activities. You live with your illness and accept it...It helped me a lot to see that there are solutions...all the activities are relevant. The questionnaire makes you think about your arthritis. (65 year old woman with SS for 30 years). .

Comments from Rheumatology OTs were (Hammond et al, 2014):

“It’s more patient oriented... It takes out the time of having to actually go through it all with them.”

“A lot of our patients say the time they spent with OT was fleeting...filling this out would be very thorough.”

“You identify the talking points straight away, which helps focus it [the treatment plan] a lot more.”

Using the EDAQ can save therapists’ time in assessing, allowing more time for providing solutions. This can help improve efficiency of and satisfaction with therapy services.

6. How can I use the EDAQ in clinical practice?

The occupational therapist / health professional introduces the assessment to the person.

For example, you might say:

“The EDAQ (Evaluation of Daily Activity Questionnaire) helps us understand about your abilities doing your daily activities. You may have noticed using aids, everyday gadgets, equipment or even different ways of doing things (such as using two hands) reduces some problems you may have. Sharing your problems and solutions with us, helps us to help you. Please complete the EDAQ in your own time at home. Take a break or two if you want. The first part asks how arthritis affects you, for example, about pain and fatigue. The second part asks in detail about your ability to do daily activities.

(Open up questionnaire to show example on page 7).

Here is an example of how it's filled in. Every question is answered twice.

- In Section A, tick how you manage every activity on your own, *without* using any different methods, such as using two hands, gadgets or help. Remember, if you can't do an activity nowadays because of your arthritis, tick “unable to do.” Only tick “not applicable” if you normally would never have done that activity.
- Then tick in the middle columns if you use a gadget or other method, or if you have help doing any of the activities. If you tick No or Help, you don't need to do Section B for that activity. If you do tick Yes: fill in Section B for that activity.

Here are some examples. *(Explain some of the examples on page 7 to check the person knows what to do. If you have time, ask them to do a few items in the EDAQ now).* Please bring it with you to our next appointment, so we can discuss what your problems are and the possible solutions for them together.”

Ask the person to complete the whole EDAQ before their next appointment with you. During that appointment, when reviewing Part 2 with the person, you need only discuss those activities causing difficulty. If there are any items not answered, ask the person to complete them in case any are problems. You can then score the EDAQ later.

If the person has limitations in specific domains only then, following treatment, they can complete just those domains. A lower domain score after treatment indicates improvement.

7. How do I score the EDAQ?

If you are using the EDAQ clinically, you can score the EDAQ by hand in 5 minutes. Total scores for each domain (separately for sections A and B) are created by summing item scores within that domain, giving an indication of the person's 'overall ability' in that domain both without (Section A) and with (Section B) ergonomic solutions. Rasch analysis has confirmed it is appropriate to sum scores of the ordinal data obtained in the EDAQ Part 2 (Hammond et al, 2015b).

Part 1: the number circled for each item is the score.

Part 2: Section A:

Scoring is as follows, if an item is ticked as:

- Not applicable = 0.
- No difficulty = 0; some difficulty = 1; much difficulty = 2; unable to do = 3.

For the total Section A score for that domain: add the scores of each item in a domain (i.e. sub-scale).

Part 2: Section B:

Scoring is as follows, if an item is ticked as:

- "Yes" to "Do you use an aid or other method?" and then section B is completed: score as: No difficulty = 0; some difficulty = 1; much difficulty = 2; unable to do = 3.
- either: "No" to "Do you use an aid or other method?"; or "Yes" but the item in Section B is not completed, score the item the same as in section A.
- "Has help/someone else does it," they are asked NOT to complete Section B. Score the item the same as in section A. If a person has ticked Section B, ignore the score. (They may have scored Section B lower/easier "with help" but such help, or not doing an activity, does not reduce their level of activity limitation. However, it may be the best/preferred solution for the person).

For the total Section B score for that domain: add i) section B domain item scores (when using ergonomic solutions) PLUS ii) if none used/ has help, add those items' A scores (as ability is unchanged).

Differences between total section A and B domain scores denote the impact of ergonomic solutions. **See the scoring example in Appendix 1.**

Domains can each be scored individually, as each domain is reliable and valid. Additionally, total domain scores can be combined into **two** components:

1. **SELF-CARE Score:** Domains 1+2+3+5+7+8+10
2. **MOBILITY Score:** Domains 4+6+9+11+12

Domains 13 and 14 are not included in these two components. There are often higher numbers of “not applicable” responses in the Caring (due to few or no childcare responsibilities in many older people) and Hobbies, Leisure & Social Activities (due to greater variations in personal interests) domains. The Caring domain has inadequate reliability and validity but can still be used clinically to identify problems, if required. The Hobbies domain has slightly lower reliability and validity than the other 12 domains but can still be used in practice and research. (For research, consider using only the first 12 domains). [See Appendix 2].

Note: Rasch analysis demonstrated a total EDAQ score cannot be calculated (i.e. all the domain scores cannot be added up together). The two component scores should be used if you wish to summarise the person’s domain scores further.

Part 3: assistive device data is investigated descriptively. This section is optional.

Dealing with missing scores in Part 2:

Missing scores for any items mean a total Section A domain score cannot be calculated for that domain for that person. It is **not** statistically appropriate to calculate mean scores as an alternative. Please check the EDAQ is completed fully/ correctly. To avoid the problem of missing data:

- Make sure any missing items are completed when you review the EDAQ with the person, so that you can score the EDAQ fully.

The EDAQ layout:

During EDAQ development, we tested several appearances for the EDAQ: ticking a grid, squares or circles. We also tested two layouts:

- a) The same layout as the Swedish EDAQ, i.e. without the central columns asking people to tick if they use “Alternate methods/aids” and/ or “Help.”
- b) Revised layout, with these central columns.

Participants preferred the grid layout. The latter format, with central columns, noticeably reduced the amount of missing data from participants.

In testing in RA, we found 4% of the possible domain scores could not be calculated due to missing data. People with severe activity limitations and poorer quality of life were more likely to be those with some missing scores. In clinical practice, when the person returns with the questionnaire, please always check all items are completed. Help the person complete any missing items so you can fully score the EDAQ.

8. What do I do with the EDAQ scores?

For clinical purposes, you should record the individual's scores for each domain and component in the EDAQ TOTAL DOMAIN SCORES table at the end of the EDAQ. (See Appendix 1 for an example). The differences between Section A and B scores denote improvements through using ergonomic solutions.

You can interpret the scores in terms of no, mild, moderate or severe disability for that domain by referring to the Table 1 on page 23.

Optionally, if you wish to present or explore results in other ways, you could also choose to:

- present the scores visually on a Spider Diagram. A template is included in Appendix 1 (excluding domains Caring and Hobbies). The scores from the EDAQ Total Domains Scores table are shown in a Spider Diagram example on the next page.
- For individual or group data, report the number and percentage of items causing difficulty, i.e. percentage with no and percentage scoring some/much/unable to do for Section A and B (e.g. 79/138 (57%) Section A items no difficulty and 97/138 (70%) Section B items no difficulty); or the number and percentage of items experienced for either Section A and/or B as: no; some; much; unable to do.
- For group data, summarise in a table or chart (e.g. box and whisker plot) domain and/ or component Section A and B scores as medians and inter-quartile ranges (but NOT means and standard deviations: see section 10).

9. How can I use the EDAQ in research?

The EDAQ can be used when it is appropriate to have a detailed measure of activity limitations to answer the study question(s). Most people in our studies were able to complete the EDAQ without any additional verbal instructions. Thus the EDAQ can be mailed to participants for completion and then returned by post or an online version could be completed (in development). We recommend that, if you are recruiting to a study with the person present and you have time, ask them to read the instructions and Part 2 example in the EDAQ and check if they need any additional verbal instructions. If you are recruiting via telephone/ mail/ online only, provide a contact telephone number so participants can ask for help if needed. If you have missing data in any replies, if possible, telephone participants to complete these items, or send a copy of the pages with missing items to the participant and ask them to complete and return, explaining the importance of obtaining all their information. If this is not possible, you can use multiple imputation and then conduct statistical analysis on the summed domain scores.

Note: For research, we recommend using the first 12 domains and two component model. Domain 13 (Caring) has inadequate reliability and concurrent validity for research (but can still be used in practice to identify problems). Domain 14 (Hobbies) has slightly lower reliability and validity than other domains but can still be included in research, as well as clinical practice, if required. [Hammond et al, 2016; See Appendix 2].

10. How do I analyse EDAQ data in research and audit?

As EDAQ data is ordinal (and Part 2 total domain scores are calculated by summing this ordinal data), data should be summarised using medians and inter-quartile ranges (IQR) and **not** means and standard deviations. **Non-parametric** tests must be used to identify differences in groups' scores, for example: between Sections A and B (without and with ergonomic solutions); before to after intervention/s; or between groups (e.g. intervention and control).

For research purposes, if required, Part 2 total domain scores can be transformed into interval data using the **Rasch Transformation Tables** for these eight conditions (EDAQ MANUAL v2 Supplement 1: Rasch Transformation Tables for Individual Condition analyses). This transformation allows use of means (SD) and parametric tests, when applicable. **This is a time-consuming process.** We therefore strongly recommend you use the total (ordinal) domain/ component scores and non-parametric statistics. If you do decide to Rasch transform

total domain/component scores to an interval scale, ensure you select the correct Rasch Transformation Table for the condition you are investigating, i.e. do not use an AS table with participants with RA. Rasch transformation of an individual's total domain scores are only valid when their domain data are complete and a total score can be summed. Similarly, Rasch transformation of an individual's components' scores (Self-Care or Mobility) are only valid when all their total domain scores within that component are complete.

Rasch transformation tables

If you are transforming data for a single condition, for example, AS only, RA only, and you do not intend to compare scores from that condition with those from another condition, you should use:

- EDAQ MANUAL v2 Supplement 1: Rasch Transformation Tables for Individual Condition Analyses

During Rasch analysis we identified that there is Differential Item Functioning between conditions. Thus, if you wish to compare data **across** conditions, you should use **Supplement 2**:

- EDAQ MANUAL v2: Supplement 2: Rasch Transformation Tables for Cross-Conditional Analyses.

Coding missing/ ambivalent scores in SPSS:

Sometimes people do not respond as per instructions, but write in comments or leave sections/columns blank. If possible, check with the participant what they meant. Guidelines on how to code the ticks/ comments assigned by participants in SPSS are given in Appendix 3.

SPSS Scoring, Coding and Rasch transformation instructions for EDAQ Part 2 domains (scales) Section A and B are available in Appendix 3.

You can manually score the EDAQ (see Section 8). However, if you have large numbers of datasets it is better to use SPSS (or a similar statistical package). Instructions are given about how to calculate total scores for Part 2 Sections A and B by recoding and creating different variables for computational purposes in Appendix 3.

There are two SPSS files available: SPSS EDAQ data entry file for all items in the EDAQ; and SPSS Part 2 total domain scores file.

11. How do I obtain the EDAQ (parts 1 and 2; parts 1,2,3), on-line EDAQ, updated EDAQ manuals, manual supplement(s), data entry files, EDAQ patient leaflet and other support materials?

These are available for download at:

<http://usir.salford.ac.uk/view/authors/10108.html#group>

Look under “Monographs” for latest versions of the EDAQ Manual, Manual Supplements 1 and 2, the English, Dutch and German versions of the EDAQ, data entry files for SPSS, EDAQ introductory leaflet for people with arthritis/MSCs. **NB. Normally** the EDAQ Parts 1 and 2 only are used in clinical practice and research.

Publications related to the EDAQ are located under “Articles.”

You can also find these and other materials/activity solutions at:
www.profalisonhammond.com (site in development, 2018)

Online EDAQ:

An electronic version is now available on-line at: <https://mskhub.com/what-is-msk-hub/>

You will need to register/ log-in to access this. The EDAQ can be completed online and scores presented/ downloaded.

In future, each item will be linked to solutions – please visit site to see progress with this development.

12. Can I use the EDAQ for free?

Yes, for non-commercial uses. The EDAQ is available under a Creative Commons license (Attribution-Non Commercial-No Derivs CC BY-NC-ND). The EDAQ cannot be altered without prior permission of the authors. Please contact the lead author if you:

- Need an electronic copy in Word for clinical, research or other uses, or for commercial use. For the latter, there may be a charge to use the EDAQ depending on the project and funder.
- want to psychometrically test the EDAQ for other conditions or in other languages, as we can advise/ collaborate with you in this process.*
- have any queries or feedback about using the EDAQ in clinical practice and/or research, contact.

a.hammond@salford.ac.uk or profalisonhammond@btinternet.com

*If you translate the EDAQ into another language, the resulting version of the EDAQ **must** be made available using a Creative Commons license and acknowledge the original developers.

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APPENDIX 1: HOW TO SCORE THE EDAQ PART 2.

**EXAMPLES USING DOMAIN 5: COOKING;
DOMAIN 8: LAUNDRY.**

Please tick (✓) to indicate your ability carrying out the activities listed below **during the last two weeks**. Please fill in **both** sections:
A: 'How do you do it **without** using an aid/gadget, alternate method or help?' If you do not normally do the activity, tick "not applicable".
B: 'How else do you do it **with** an aid/gadget or alternate method?' Fill in the middle columns. Leave B blank if you tick "no" or "have help."

5. COOKING							A. How do you do it without an aid/ gadget, alternate method or help?			Do you use an aid or other method?		Have help/ Someone does it for me	B. If yes, how else do you do it with an aid/gadget or alternate method?					
	Not Applicable	Without difficulty	Some difficulty	Much difficulty	Unable to do	Score	Yes	No		Please describe below which aid/s or other method/s you use?	Without difficulty	Some difficulty	Much difficulty	Unable to do	Score			
1.Stand while working in the kitchen				✓		2	✓			Perch stool	✓				0			
2.Set the table/ carry plates, cups etc				✓		2			✓						2			
3.Peel and chop vegetables				✓		2	✓			Easy Peeler; bigger knife. Use frozen.	✓				0			
4.Carry a full pan to/ from the cooker			✓			1		✓							1			
5.Drain water from a saucepan (e.g. vegetables, pasta)				✓		2		✓							2			
6.Remove heavy items (e.g. bag of sugar) from top cupboards				✓		2	✓			Wear splint; keep heavy items low down		✓			1			
7.Baking (eg. Cakes, bread, pastry)	✓					0									0			
8.Take things in/out of oven				✓		2		✓							2			

Please tick (✓) to indicate your ability carrying out the activities listed below **during the last two weeks**. Please fill in **both** sections:
A: 'How do you do it **without** using an aid/gadget, alternate method or help?' If you do not normally do the activity, tick "not applicable".
B: 'How else do you do it **with** an aid/gadget or alternate method?' Fill in the middle columns. Leave B blank if you tick "no" or "have help."

5. COOKING (continued)	A. How do you do it without an aid/ gadget, alternate method or help?						Do you use an aid or other method?		Have help/ Some-one does it for me	B. If yes, how else do you do it with an aid/gadget or alternate method?						
	Not Applicable	Without difficulty	Some difficulty	Much difficulty	Unable to do	Score	Yes	No		Please describe below which aid/s or other method/s you use?	Without difficulty	Some difficulty	Much difficulty	Unable to do	Score	
9.Wash up				✓		2	✓			Dishwasher	✓				0	
10.Put crockery/pans etc into kitchen cupboards			✓			1		✓							1	
11.Use a kettle (e.g. fill, pour)				✓		2		✓							2	
12.Turn cooker knobs		✓				0									0	
13.Open fridge door		✓				0									0	
14.Prepare and cook a snack and/or a meal				✓		2	✓			Gadgets help, still tired		✓			1	
Total Score: Section A = 20										Total Score: Section B = 12						

Please tick (✓) to indicate your ability carrying out the activities listed below **during the last two weeks**. Please fill in **both** sections:
A: 'How do you do it **without** using an aid/gadget, alternate method or help?' If you do not normally do the activity, tick "not applicable".
B: 'How else do you do it **with** an aid/gadget or alternate method?' Fill in the middle columns. Leave B blank if you tick "no" or "have help."

8. LAUNDRY/ CLOTHES CARE	A. How do you do it without an aid/ gadget, alternate method or help?						Do you use an aid or other method?		Have help/ Some- one does it for me	B. If yes, how else do you do it with an aid/gadget or alternate method?						
	Not Applicable	Without difficulty	Some difficulty	Much difficulty	Unable to do	Score	Yes	No		Please describe below which aid/s or other method/s you use?	Without difficulty	Some difficulty	Much difficulty	Unable to do	Score	
1.Do the hand washing				✓		2	✓			Use wash machine for everything now	✓				0	
2.Use a washing machine (e.g. load and unload)		✓				0		✓						0		
3.Hang out washing				✓		2	✓			Use tumble drier for everything now	✓			0		
4.Plug in and pull out a plug				✓		2	✓			Plug pulls	✓			0		
5.Put up an ironing board			✓			1		✓	✓	Husband does				1		
6.Iron			✓			1	✓			Little and often; wear wrist splint; iron only what need to	✓			0		
7.Do small repairs e.g. hemming, buttons			✓			1		✓						1		
8.Cut cloth and/ or use scissors			✓			1		✓						1		
9.Pick up pins/needles			✓			1	✓			magnet	✓			0		
Total Score: Section A =						11				Total Score: Section B =						3

Example: EDAQ TOTAL DOMAIN SCORES**Office Use only:**

Name: _____

Date: ____/____/____

EDAQ Domain scores

	Domain	Section A Total Score	Section B Total Score	Difference: B-A
1	Eating/ Drinking	12	9	-3
2	In the Bathroom/ Personal Care	8	6	-2
3	Getting Dressed/ Undressed	10	6	-4
4	Bathing/ Showering	15	10	-5
5	Cooking	20	12	-8
6	Moving around Indoors	6	6	0
7	Cleaning the House	14	10	-4
8	Laundry/ Clothes Care	11	3	-8
9	Moving & Transfers	7	7	0
10	Communication	6	4	-2
11	Moving around Outdoors/ Shopping	7	7	0
12	Gardening/ Household Maintenance	18	12	-6
13	Caring	4	4	0
14	Hobbies, Leisure & Social Activities	12	4	-8
	SELF-CARE Score Domains: 1+2+3+5+7+8+10	81	50	-31
	MOBILITY/ PARTICIPATION Score Domains: 4+6+9+11+12	53	42	-11

EDAQ DOMAIN AND COMPONENT SCORE RANGES

	Domain	Score Range
1	Eating/ Drinking	0-33
2	In the Bathroom/ Personal Care	0-36
3	Getting Dressed/ Undressed	0-33
4	Bathing/ Showering	0-33
5	Cooking	0-42
6	Moving around Indoors	0-36
7	Cleaning the House	0-27
8	Laundry/ Clothes Care	0-27
9	Moving & Transfers	0-18
10	Communication	0-18
11	Moving around Outdoors/ Shopping	0-39
12	Gardening/ Household Maintenance	0-21
13	Caring	0-27
14	Hobbies, Leisure & Social Activities	0-27
	Component	Score Range
	SELF-CARE Score Domains: 1+2+3+5+7+8+10	0-216
	MOBILITY/ PARTICIPATION Score Domains: 4+6+9+11+12	0-147

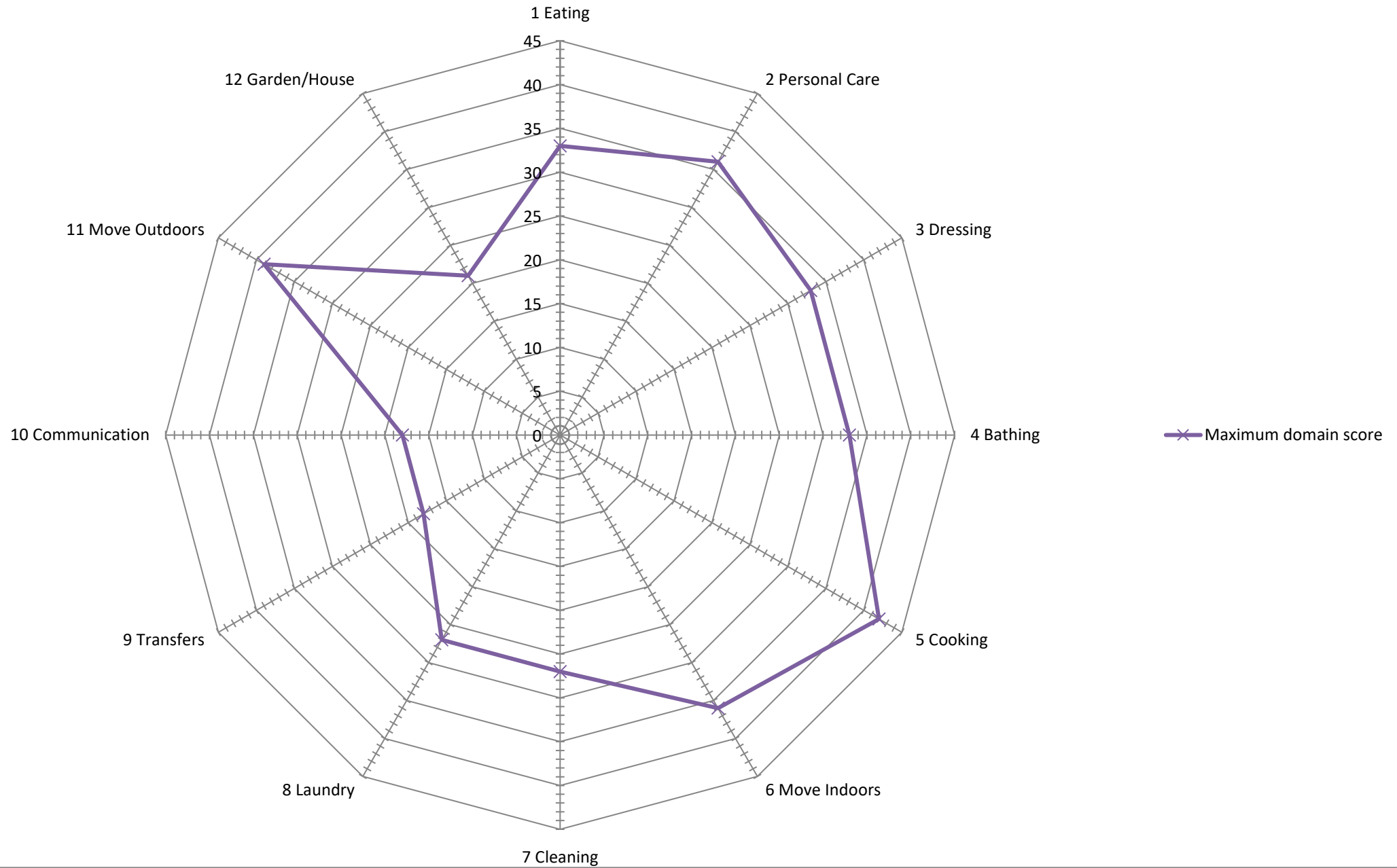
Appendix 2: Table 1: Interpreting EDAQ domain scores:

	DOMAIN	Score Range	Score cut-offs for no, mild moderate and severe disability.
1	Eating/ Drinking	0-33	0 (no) 1-11 (mild) 12-22 (moderate) 23-33 (severe)
2	In the Bathroom/ Personal Care	0-36	0 (no) 1-12 (mild) 13-24 (moderate) 25-36 (severe)
3	Getting Dressed/ Undressed	0-33	0 (no) 1-11 (mild) 12-22 (moderate) 23-33 (severe)
4	Bathing/ Showering	0-33	0 (no) 1-11 (mild) 12-22 (moderate) 23-33 (severe)
5	Cooking	0-42	0 (no) 1-14 (mild) 15- 28 (moderate) 29-42 (severe)
6	Moving around Indoors	0-36	0 (no) 1-12 (mild) 13-24 (moderate) 25-36 (severe)
7	Cleaning the House	0-27	0 (no) 1-9 (mild) 10-18 (moderate) 19-27 (severe)
8	Laundry/ Clothes Care	0-27	0 (no) 1-9 (mild) 10-18 (moderate) 19-27 (severe)
9	Moving & Transfers	0-18	0 (no) 1-6 (mild) 7-12 (moderate) 13-18 (severe)
10	Communication	0-18	0 (no) 1-6 (mild) 7-12 (moderate) 13-18 (severe)
11	Moving around Outdoors/ Shopping	0-39	0 (no) 1-13 (mild) 14-26 (moderate) 27-39 (severe)
12	Gardening/ Household Maintenance	0-21	0 (no) 1-7 (mild) 8-14 (moderate) 15-21 (severe)
13	Caring	0-27	0 (no) 1-9 (mild) 10-18 (moderate) 19-27 (severe)
14	Hobbies, Leisure & Social Activities	0-27	0 (no) 1-9 (mild) 10-18 (moderate) 19-27 (severe)
	COMPONENT	Score Range	Score cut-offs
	SELF-CARE Score		0 (no disability) 1-72 (mild) 73-144 (moderate) 145-216 (severe)
	Domains 1+2+3+5+7+8+10	0-216	
	MOBILITY/ PARTICIPATION Score	0-147	0 (no disability) 1-49 (mild) 50-98 (moderate) 99-147 (severe)
	Domains: 4+6+9+11+12		

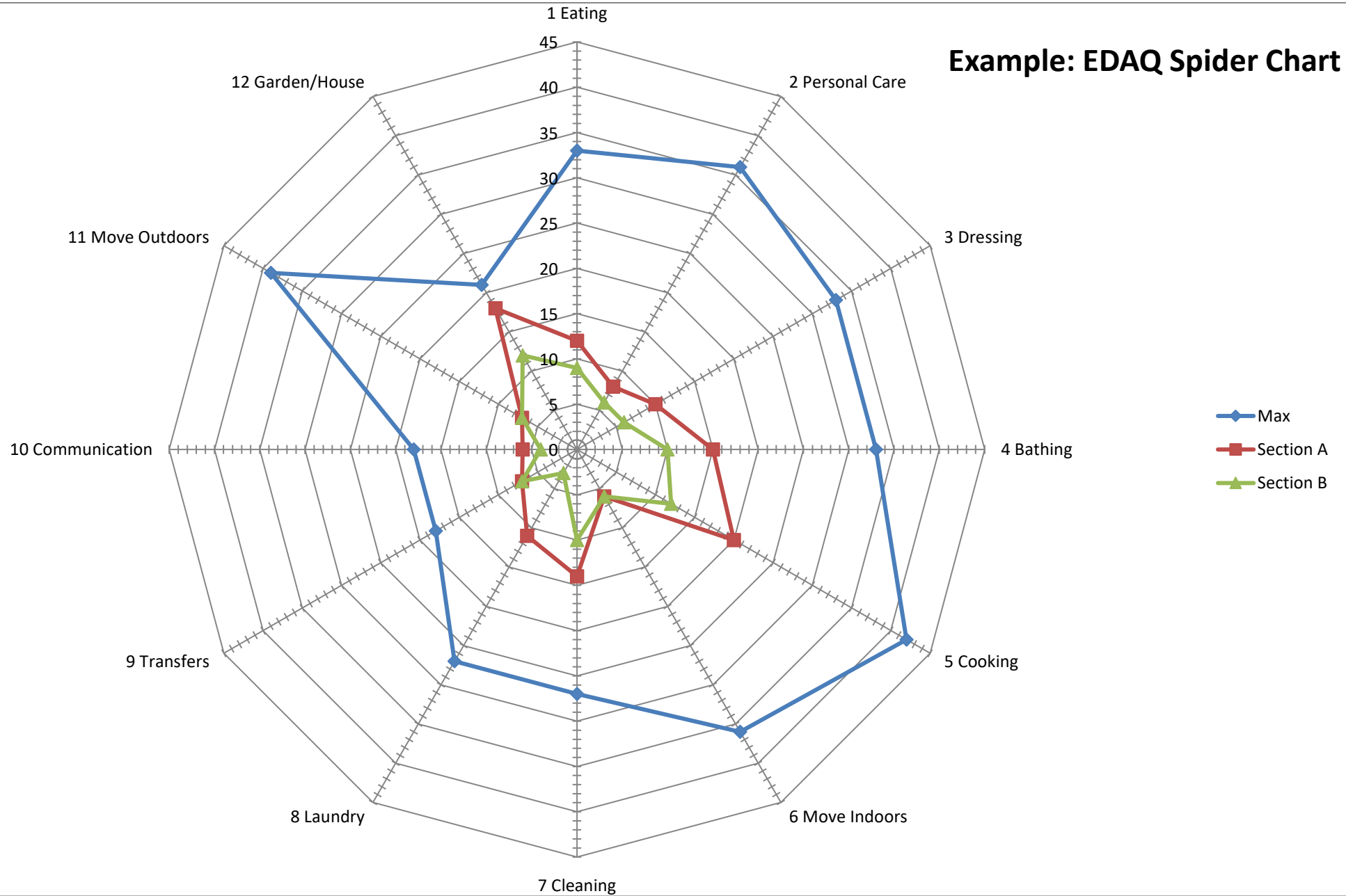
Appendix 3: EDAQ Spider Chart

An EDAQ Spider Chart Template is included on the next page (page 23). This can be copied.

EDAQ Spider Chart



Example: EDAQ Spider Chart



Appendix 4:
Reliability and validity of domains 13 and 14
(Caring and Hobbies, Leisure and Social Activities)

The Caring and Hobbies domains were tested in rheumatoid arthritis and found to be unidimensional. Thus the scores from these domains can each be added up to create total scores for each domain (Hammond et al, 2015b).

The reliability and validity of the Hobbies domains in RA and MSCs is sufficient for clinical and research use (Hammond et al, 2015b; Hammond et al, 2016).

The reliability and validity of the Caring domain is not and can only be used to identify problems with clients.

Table 1: Reliability testing of the EDAQ Part 2: Caring and Hobbies domains for each musculoskeletal condition (n=1200).

EDAQ domain (score range)	n	Test 1 A α	Test 1 Section A score	Test 1 Section B score	Test 2 Section A score	Test 2 Section B score	Test- retest Section A r_s	Test- retest Section B r_s
13: Caring (0-27)								
AS	162	0.93	0 (0-1)	0 (0-1)	0 (0-1)	0 (0-1)	0.55+	0.56+
OA	136	0.93	0 (0-2)	0 (0-2)	0 (0-2)	0 (0-2)	0.57*	0.57*
SLE	160	0.93	0 (0-1)	0 (0-1)	0 (0-1)	0 (0-1)	0.56*	0.56*
SS	168	0.88	0 (0-1)	0 (0-1)	0 (0-1)	0 (0-1)	0.64*	0.60*
CP	190	0.93	1 (0-5)	1 (0-5)	0 (0-4)	0 (0-4)	0.60*	0.60*
CULMD	147	0.94	0 (0-1)	0 (0-1)	0 (0-1)	0 (0-1)	0.49*	0.49*
PSS	166	0.90	0 (0-1)	0 (0-1)	0 (0-1)	0 (0-1)	0.52*	0.51*
14: Hobbies, Leisure & Social Activities (0-27)								
AS	160	0.87	2 (0-4)	2 (0-14)	0 (0-1)	0 (0-1)	0.71*	0.71*
OA	170	0.82	3 (1-6)	3 (1-6)	2 (1-4)	2 (1-4)	0.61*	0.61*
SLE	151	0.88	3 (1-7)	3 (1-7)	2 (0-5)	2 (0-5)	0.78*	0.78*
SS	160	0.85	3 (1-6)	3 (1-6)	3 (1-7)	3 (1-7)	0.77*	0.76*
CP	187	0.88	5 (3-10)	5 (3-10)	5 (2-19)	5 (2-9)	0.67*	0.68*
CULMD	144	0.86	2 (1-5)	2 (1-5)	2 (0-4)	2 (0-4)	0.65*	0.63*
PSS	156	0.82	2 (0-4)	1.5 (0-4)	1 (0-4)	1 (0-4)	0.69*	0.69*

Key : * p \leq 0.001; + p < 0.01; α = Cronbach's alpha; r_s = Spearman's correlation coefficient; AS = Ankylosing spondylitis; OA = osteoarthritis; SLE= systemic lupus erythematosus; SS = systemic sclerosis; CP = chronic pain conditions; CULMD = chronic hand/upper limb musculoskeletal disorders; PSS = Primary Sjögren's syndrome.

Table 2: Psychometric testing of EDAQ Part 2 (Caring and Hobbies domains) for each musculoskeletal condition (n=1200).

EDAQ domain (score range)	HAQ20	SF36v2: PF	SF36v2: Vitality	SF36v2: Bodily Pain	Hand Pain	QOLS	Perceived Health
13: Caring (0-27)							
AS	0.37*	-0.26+	-0.23+	-0.29*	0.14 ^{ns}	-0.11 ^{ns}	0.25*
OA	0.05 ^{ns}	-0.13 ^{ns}	-0.13 ^{ns}	-0.19#	0.14 ^{ns}	-0.05 ^{ns}	0.04 ^{ns}
SLE	0.06 ^{ns}	-0.01 ^{ns}	-0.14 ^{ns}	-0.02 ^{ns}	0.02 ^{ns}	-0.06 ^{ns}	0.06 ^{ns}
SS	0.20#	-0.18#	-0.09 ^{ns}	-0.12 ^{ns}	0.17 ^{ns}	-0.06 ^{ns}	0.13 ^{ns}
CP	0.23+	-0.23*	-0.14 ^{ns}	-0.18#	0.08 ^{ns}	-0.21+	0.16#
CULMD	0.39*	-0.30*	-0.31*	-0.28*	0.24*	-0.14 ^{ns}	0.28*
PSS	0.26+	-0.26+	-0.22+	-0.21+	0.20#	-0.09 ^{ns}	0.24+
14: Hobbies, Leisure & Social Activities (0-27)							
AS	0.69*	-0.67*	-0.49*	-0.61*	0.43*	-0.43*	0.59*
OA	0.67*	-0.50*	-0.50*	-0.52*	0.38*	-0.37*	0.55*
SLE	0.70*	-0.70*	-0.46*	-0.60*	0.59*	-0.44*	0.62*
SS	0.73*	-0.67*	-0.48*	-0.51*	0.52*	-0.55*	0.61*
CP	0.66*	-0.61*	-0.38*	-0.53*	0.45*	-0.38*	0.54*
CULMD	0.72*	-0.55*	-0.56*	-0.54*	0.52*	-0.40*	0.47*
PSS	0.59*	-0.51*	-0.44*	-0.56*	0.47*	-0.36*	0.58*

Concurrent validity with comparator measures (Spearman's correlations);

Key : * p < 0.001; + p < 0.01; # p < 0.05; ns = not significant. Negative correlations occur with SF36v2 scores as higher scores represent better function in the SF36v2; AS = Ankylosing spondylitis; OA = osteoarthritis; SLE= systemic lupus erythematosus; SS = systemic sclerosis; CP = chronic pain conditions; CULMD = chronic hand/upper limb musculoskeletal disorders; PSS = Primary Sjögren's syndrome. HAQ: Health Assessment Questionnaire; QOLS: Quality of Life Scale (see Hammond et al, 2016)

Appendix 5: For Research Use only

**Guidelines for coding/ scoring EDAQ Part 2 data in
SPSS or other statistical packages;**

Rasch Transformation instructions for EDAQ Part 2

GUIDELINES FOR CODING EDAQ PART 2 IN STATISTICAL PACKAGES

Scores:

0 = no difficulty; 1 = some difficulty; 2 = much difficulty; 3 = unable to do.

8 = not applicable. **Code 8 is re-coded to 0 when scoring the EDAQ during analysis.**

Missing data: 9 = missing; 7 = with help; 6 = uses an ergonomic strategy **but** score missing

Sometimes a person does not tick some items but writes comments instead; or does not locate ticks in boxes correctly. If possible, always check with the person the correct answer. If this is not possible, the following help determine how to score those items.

1. SECTION A:

a) Missing data:

If the item is:

- Not ticked (i.e. left blank) = 9 (BUT if it is clear from a written comment in section B that the activity is "not applicable" = 8)
- Written in "unsure" = 9
- Written in, e.g. "very carefully; just sit and do it" but **no** score ticked, i.e. not possible to identify degree of difficulty) = 9

b) "Not applicable":

If item is:

- Ticked as "Not Applicable" = 8
- Written in, for example, that "does not do activity; does not have one" = 8
- Ticked "Not Applicable" but then written in that gets help to do activity (e.g. "go to hair salon/ husband does/ go to chiropodist" etc) in Section A or B = 7

c) Help:

- No tick in Section A, but has written in section A or B e.g. "my husband goes with me; my wife helps" = 7

d) Unclear location of tick,

ie. Tick is placed crossing the boundary between columns (no difficulty (0); some difficulty (1), much difficulty (2), unable to do (3):

- Between 0 and 1; code as 1, as participant indicating some degree of difficulty.
- Between 1 and 2; code as 2
- Between 2 and 3; code as 2, as participant must be able to do it at times if crosses boundary.

2. SECTION B

If Section A ticked as:	And Section B is ticked/ written:	Then code B as:
Not applicable:		
8	Ticked "No" to aid/other method	8 (i.e. not applicable)
8	Left blank	8
8	Ticked "No" to aid/other method but has ticked section B	8 <i>Ignore tick in B as has stated "No does not use an aid/other method." And should not have completed Section B.</i>
8	Has ticked "Have help/ someone else does it for me"	7
Without difficulty (0)		
0	Ticked "No" to aid/other method	8
0	Puts a line through whole section	8 for all items
0	Left blank	8 <i>nb: as the task did not present difficulty in Section A, thus it is not applicable to use aid/ alternate method</i>
0	Ticked Yes to "aid/other method" but not scored B (may include comments (eg "take my time; just me")	0 <i>nb: As the task did not present difficulty in Section A, it cannot be any harder when uses an aid or other method</i>
0	Not ticked "aid/other method" or "help" or added comments: Scored B as 0	8
0	Ticked "Yes" to uses an aid/other method and then scored B as 1, 2 or 3 <i>(NB unlikely this occurs as not logical to use a more difficult method</i>	8 <i>nb: as the task did not present difficulty in Section A, it must be "not applicable" (or unnecessary) to use aid or alternate method</i>
0	Ticked "Have help/ someone else does it for me"	7 NB re-score Section A as 7 <i>(as the activity was incorrectly scored as no difficulty in Section A, because the person is not (or not fully) doing it. Nb. 7 is a missing data score.</i>
Some, much difficulty/ unable to do (1,2,3)		
1, 2 or 3	Ticked " No " to aid/other method	8
1, 2 or 3	Writes N/A across whole section Puts a line through whole section	8 for all items
1, 2 or 3	Ticked " No " to aid/other method and then scores B <i>(In this case, usually the person has scored B the same as A,</i>	8 <i>As they have already ticked does <u>not</u> use an aid/other</i>

	<i>although it was unnecessary to do so).</i>	<i>method Section B is “not applicable”</i>
1, 2 or 3	Not ticked if uses an aid/other method or has help and left B blank May or may not have included comments (e.g. “time management, take time; I’m very careful”) indicating uses a solution	9 <i>(We cannot “guess” if a method described makes item easier)</i>
1, 2 or 3	Ticked Yes to aid/other method but no score in B	6 <i>We cannot “guess” how much easier an aid/other method is; but this code indicates that they do use another strategy. 6 is a form of missing data</i>
1, 2 or 3	Scored Section B HIGHER than section A	9 <i>NB unlikely this occurs as it is not logical to use a more difficult method</i>
1, 2 or 3	Ticked “Have help/ someone else does it for me”	7
1, 2 or 3	Not ticked “have help” column but clear does from comments e.g. “wife /other helps; husband/wife does it; seek/get help/assistance”	7
1, 2 or 3	Ticked “Have help/ someone else does it for me” and/or includes comments “wife /other helps; husband/wife does it; seek/get help/assistance” and scored section B	7 <i>Not required to complete Section B. (Even if person’s B score is less than section A score, help does not change their personal level of dis/ability)</i>
1, 2 or 3	Ticked “ Yes ” to uses an aid/other method and /or includes comment about aid/other method used and scores section B	Score is whatever the participant ticks.

CALCULATING SECTION A AND B SCORES IN SPSS

In a nutshell:

1. If Section **A** item variable has “8” (non-applicable) values: create new item variable **Ar**; copy **A** into **Ar** and recode 8 as “0”
2. Create **Bd** item variable: copy **A** (or **Ar**) into **Bd** / Compute **Bd**= (If $B \leq 3$) **B - A** (or **Ar**)
3. Create **C** item variable: copy **Bd** into **C** / Compute **C**= (If $B \leq 3$) **Bd + A** (or **Ar**)
4. Compute **Total domain scores for A and B** / e.g. **TS1A=S1A1(or Ar)+S1Ar2+...3..4..**
TS1B=S1C1+S1C2+ S1C3 + S1C4...(add *recoded C variables, not original*)
5. Compute **differences between A and B**/ e.g. **DiffS1AB= TS1B – TS1A**

In section A and B 8= not applicable; 9= missing

In section B 6= aid/alternate method (but then did not complete rest of section B)
7= with help

Examples are given for:

“Scale 1: Eating; section A item 1 lift a glass; Test 1”: variable name = S1A1glass1.

“Total score Scale 1 Section A Eating Test 1”: variable name = TS1AEating1

Scoring Procedure

- Create a new **Section Ar** variable for those section A variables (items) scored as “not applicable=8
 - Recode “8” as “0” in the new Section **Ar** variables. (If the item was “not applicable” it can be considered as “no difficulty” to allow scoring this item). Example: **S1A1glass1r**
 - **Action:** Transform / compute into different variable/ select if S1A1glass1/ recode “8” as “0”
2. Create a new **Section B** recoded variable (**Bd**) (i.e. difference Section A and B)
- Copy and paste Section A into Section **Bd** variable (If needed to create **Ar** variable, copy and paste **Ar** variable instead of **A**)
 - Compute **Bd** variable (Note: select only those cases to compute **IF B** value was NOT=6-9). Do this by:
 - Transform/ compute variable/ IF (i.e. include if case satisfies condition) S1B1 glass1 =<3
 - Compute (for example) S1**Bd**1glass1= S1B1glass1 – S1A1glass1 (or S1A1glass1r if **Ar** was created)

- **Bd= B-A (or Ar)**

This calculates the differences between A and B for only those items in which the responder had identified an aid item was used in section B.

Review the Bd variable column in data view to check the score changes are happening correctly before proceeding to next step.

3. Compute **new C variable** (i.e. the recoded section B)

- Create C variable e.g. S1C1glass1.
- Copy and paste Bd into C
- Transform/ compute variable/ IF (i.e. include if case satisfies condition) S1B1 glass1=<3
- Compute S1C1glass1= S1A1glass1 + S1Bd1glass1 (or S1A1glass1r if Ar was created)
- **C=Bd+A (or Ar)**

This ensures only calculating score for section B (i.e. difference between B and A) for items where participants had not originally scored these as 6, 7 or 9)

4. Compute **total score for section A and B** (use **Ar** instead of A when applicable), **e.g.**

- TS1AEating1= S1A1glass1+ S1A2cup1+ S1A3knife1 + S1A4slice1r + S1A5fridge1 + S1A6pour1 + S1A7bottop1 + S1A8jar1 + S1A9tin1r + S1A10pack1r
- TS1BEating1 = S1C1glass1 + S1C2cup1 + S1C3knife1 + S1C4slice1 + S1C5fridge1 + S1C6pour1 + S1C7bottop1 + S1C8jar1 + S1C9tin1 + S1C10pack1

5. Compute differences **between section A and B to create a difference score (if required)**

- Compute "DiffS1ABEating1" = TS1BEating1 – TS1AEating1 (**Diffs= TSB-TSA**).

Rasch Transforming data in SPSS

1. Use the correct Rasch Transformation Table for the condition you are investigating.
2. Use the Recode facility in SPSS. For example: in Ankylosing Spondylitis (AS) for **Self Care: Scale 1 Eating**
 - Recode: TS1AEating1 (= the RAW score) into **RTS1AEating1** (= Rasch Transformed score)
 - use R as a prefix to the variable name to denote the Total score for “Scale 1 Section A Eating Test 1” is now Rasch transformed:

AS:	
RAW score	1. Eat Rasch T =
0	0.00
1	2.34
2	3.92
3	4.99
4	5.87
5	6.62
6	7.25
7	7.90
8	8.49
9	9.10
10	9.69
11	10.32
12	10.97
13	11.66
14	12.39
15	13.17
16	13.96
17	14.77
18	15.59
19	16.39
20	17.20
21	18.00
22	18.77
23	19.58
24	20.39
25	21.28
26	22.25
27	23.38
28	24.83
29	26.93
30	30.00

Example from Appendix 2: Scale 1 Eating (Ankylosing Spondylitis)

3. Each domain (sub-scale) for each condition being investigated will need to be recoded using the correct Rasch Transformation table for that condition. Check you are using the correct domain (sub-scale) re-coding values within that table.
4. This Rasch transformation process is only required if it is necessary to use parametric tests. To avoid this time consuming process, non-parametric analyses should be used with the total scores created from the ordinal data.