



# Amit Kulkarni & Michelle Lawton

## Research and Development Forum

RCSLT Research & Development Manager **Amit Kulkarni** introduces a worked example of critical appraisal by research champion **Michelle Lawton**

### Critical appraisal: a worked example

In last month's R&D Forum, we reintroduced the topic of critical appraisal and signposted you to key resources. This month, to further clarify the process, we aim to show what critical appraisal looks like in practice.

Michelle Lawton, an RCSLT research champion, used the Critical Appraisal Skills Programme tool (CASP, 2017) to appraise a qualitative study of SLTs working with people with aphasia. Here, she explains how she developed her critical appraisal skills, before going on to demonstrate them in action. Hopefully, this will illustrate how you could do the same. If you feel parts of the analysis are outside your current level of knowledge, consider finding out more as part of your next CPD activity.

#### Developing skills

Michelle says: In my experience, critical appraisal demands a measure of common sense to balance the strengths and benefits against the weaknesses or flaws of a given article. Alongside common sense, a basic grasp of qualitative and quantitative methodologies has helped me to make decisions

about whether I feel a study is valid or trustworthy.

Having recently completed a systematic review and quality appraisal, I would say that, as with all skills, you need to practise critically appraising research to feel competent. Using a critical appraisal tool, such as the CASP (see the example below), has enabled me to make sense of various aspects of critical appraisal in a structured and coherent way. In addition, comparing and discussing critically appraised articles with colleagues has enabled me to reflect on my own skills and develop critical appraisal competencies, which has been invaluable. The application of time is therefore essential to acquiring critical appraisal skills, and these skills are crucial in enabling you to integrate the best available evidence with your own clinical expertise alongside patient values and expectations.

#### CASP appraisal tools

The CASP critical appraisal tools can help to make sense of a variety of research studies. The checklists, which can be downloaded from the CASP website ([www.casp-uk.net/](http://www.casp-uk.net/)

net/checklists), are designed for appraising systematic reviews, randomised controlled trials, cohort studies, case control studies, economic evaluations, diagnostic studies, qualitative studies and clinical prediction rule. Each checklist comprises questions that consider three broad issues: are the results of the study valid; what are the results; will the results help locally?

#### Critical appraisal in action

The article reviewed below, 'Speech-language therapists' process of including significant others in aphasia rehabilitation' (Halle et al, 2013), was appraised using the CASP qualitative checklist. The study aims to explore how SLTs include significant others in the process of aphasia rehabilitation. Semi-structured interviews were conducted with eight SLTs working with people with aphasia in rehabilitation centres. Inclusion of significant others was perceived to be challenging, but ideal, if time allowed. The authors maintain that re-defining significant others as part of the 'patient group' will allow clinicians to consider involving carers and families in rehabilitation as standard.

#### Screening questions

##### 1. Was there a clear statement of the aims of the research?

Yes.

✓ The authors "aim to explore the process of working with significant others of people with aphasia in the rehabilitation setting" (pp749-750) from the perspective of the SLT.

##### 2. Is a qualitative methodology appropriate?

Yes.

✓ A qualitative methodology is appropriate to address the above aims (exploring a process from a subjective viewpoint).



ILLUSTRATION BY Sean McSorley

Is it worth continuing? Yes

#### Detailed questions

##### 3. Was the research design appropriate to address the aims of the research?

Yes.

✓ The research design, based on grounded theory was appropriate to address the aims of the research. Grounded theory provides a systematic, inductive (data driven) approach, with the aim of constructing theory (Charmaz, 2008), which aligns with the study's objectives.

##### 4. Was the recruitment strategy appropriate to the aims of the research?

No

✗ Although the authors sample participants who have experience of working with significant others in the rehabilitation setting, there is little evidence that participants are specifically sought to develop a theory as it emerges (theoretical sampling), consistent with this methodology. This process is

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central to grounded theory as it ensures the emergent theory is 'grounded' in the data.

##### 5. Were the data collected in a way that addressed the research issue?

Yes

✓ The data were collected in the participants home/work, using a semi-structured interview frame in which the authors provided a topic guide. The authors discussed modification to the topic guide as

new areas of interest emerged. Theoretical saturation, the point at which no more new concepts are emerging from the data, is considered (p750, p752).

✗ In terms of the depth of analysis, I would question whether a single interview with each participant would be sufficient.

##### 6. Has the relationship between researcher and participants been

##### adequately considered?

Yes

✓ The field researcher considered her own interaction with participants from a professional and personal perspective. The authors attempted to reduce socially desirable responses and engaged in a reflexive process in order to challenge their own understandings and beliefs (p752).

##### 7. Have ethical issues been taken into consideration?

Yes

✓ The study has received ethical approval for conduct.  
✗ The authors do not report what information was given to participants prior to consent.

##### 8. Was the data analysis sufficiently rigorous?

Yes

✓ The authors provide an in-depth description of how the themes were derived from the data, providing examples of data coding. Rigour was enhanced through memo-writing and discussion with research team members. The authors engaged in a reflexive process, actively questioning and rechecking whether their interpretations were consistent with the original data source (p752). Although there is no discussion of cases that appear to be 'deviant' from the norm (deviant case analysis) in the method, the authors provide evidence of this in the findings (the other participant, pp756-7).

##### 9. Is there a clear statement of findings?

Yes

✓ The findings are clearly stated. The authors discuss their findings in the context of potentially contradictory research and report validating their findings with SLTs.

✗ There appears to be limited evidence of integrating 'deviant' data into the theoretical model.

##### 10. How valuable is the research?

✓ The authors provide an in-depth discussion of how the model can be adapted to improve outcomes for people with aphasia and significant others. The authors highlight the applicability of the findings only for those working in similar contexts. Applying these findings to the aphasia rehabilitation context would mean reflecting on my own beliefs and actively involving significant others in the process of rehabilitation. Inclusion of significant others and communication partner training could be incorporated into therapeutic interventions and thus become a therapeutic process in and of itself, rather than an idealised 'bonus'.

#### Essential skill

Critical appraisal is an essential skill for all clinicians to develop, to ensure that we select the most efficacious and effective treatment interventions for our patients. The CASP tool provides a useful framework for those who are new to critical appraisal or wanting to develop their critical appraisal skills further. ■

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#### References

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