

# CAHE JC Critically Appraised Article Summary

## Journal Club Details

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<b>Date of submission</b>	23 October 2007
<b>Journal Club location</b>	Port Pirie Regional Health Service
<b>JC Facilitator</b>	Alison Vine

### Clinical Scenario

Is a mealtime intervention delivered by a multi-disciplinary team better than feeding intervention by individual disciplines to children aged 0-7 and their families?

### Review Question/PICO/PACO

- P** Children aged 0-7 and their families
- I** Feeding/mealtime intervention provided by multi-disciplinary "mealtime management team"
- C** Feeding intervention by individual disciplines (e.g. speech, OT, dietetics)
- O** Improved quality of care to children and their families

### Article/Paper

Galensky TL, Miltenberger RG, Stricker JM & Garlinghouse MA 2001, 'Functional assessment and treatment of mealtime behavior problems', *Journal of Positive Behavior Interventions*, 3(4): 211-224

**Article Methodology:** Cohort / Observational

(NB: Due to the design of the study, some appraisal categories as described for cohort studies may not be appropriate. These have been highlighted within this appraisal.)

**Returned JC on:** 21 November 2007

**By CAHE staff member:** Mat Prior





Ques No.	Yes	Can't Tell	No	Comments
1		✓		<p>Whilst it is clear that it was the intent of the authors to investigate appropriate assessment methods for mealtime difficulty in children, and determine the effectiveness of an intervention to target food refusal (p212; last paragraph of introduction), it is not clear who the population of interest is. The extensive literature review presented in the introduction outlines mealtime problems in a variety of child populations, notably those with specific medical conditions (eg examples p212; authors also make note on p211 that "The bulk of scientific research has focused on...children with intellectual, neurological or physical limitations"), however it is not clear who the population of interest is in this study. We are later told that the children were "typically developing" (Methods, p212), however it is not clear whether these children were intended to be studied. Indeed, no information was provided on subject selection.</p> <p>As the clinical scenario/PICO question is specific to mealtime intervention, this section of the article (particularly results) will be focused on for the remainder of the critical appraisal.</p>
2	✓			<p>With respect to the first and second phases of the study, it appears that an observational approach was used, however the methods used to conduct the study could be more clearly defined &amp; presented.</p> <p>With respect to the third phase of the study – 'Treatment Evaluation' – it is stated that a "...multiple baseline across participants' research design was used." (p218). This method is a type of experimental design, often used in behavioural analysis studies (Carr 2005)</p> <p>Carr JE 2005, 'Recommendations for reporting multiple-baseline designs across participants', Behavioral Interventions, 20(3), 219-224.</p>
3		✓		<p>No information is provided as to how the subjects were recruited. It appears as if the sample may have been recruited conveniently, however we cannot be certain of this.</p>
4				<p>N/A No 'exposure', or risk, was measured in this study.</p>



Ques No.	Yes	Can't Tell	No	Comments
5		✓		<p>With respect to the first and second phases of the study (assessment of mealtime behaviour), standardised instruments/tools were used to provide measurements. Inter-rater reliability was assessed; however, only the A-B-C instrument could be considered to have satisfactory reliability (FAQ &amp; FAI tools &lt; 60%). It is unclear as to whether the stimulus preference and avoidance assessments used in phase 2 were standardised, however they appear to have better inter-observer reliability.</p> <p>For the mealtime intervention, three main outcomes were measured. The mealtime behaviour of the child was measured via videotaped assessment by two assessors, the 'treatment integrity' – a form of validation as to whether the intended behavioural intervention was actually performed by the parent or caregiver – was assessed via video observation, whilst the perceived acceptability of the treatment ('Social Validation') was assessed via standardised questionnaire [TEI-SF].</p> <p>Inter-rater reliability of the behavioural observation of the child appeared to be good (70% agreement or greater), however information on reliability/validity was not provided for treatment integrity assessment. Similarly, such information was not provided for the social validation assessment, however a standardised questionnaire was used.</p>
6			✓	<p>(This section is focused on the third phase of the study – the mealtime intervention)</p> <p>Many potential confounding factors are presented and discussed by the authors (p.222). However, the extent to which there was 'treatment integrity' (parent/caregiver following intended treatment) may be considered questionable, as only 25% of the baseline and treatment sessions were assessed (p.219). It is possible that overall adherence to the treatment protocols may have been different than that perceived, which conceivably could affect the results. Whilst not interacting with the child, the presence of the assessor and video equipment in the dining room during mealtimes, and their potential impact on the child's behaviour, was a potential confounder that was not widely considered.</p>
7	✓			<p>(This section is focused on the third phase of the study – the mealtime intervention)</p> <p>Up to 23 sessions (10 baseline, 13 treatment) were recorded (p.220). It is not clear as to the duration of time over which the subjects were followed, however the number of sessions does appear adequate.</p> <p>Whilst not an apparent focus of the study, the persistence of behavioural change post-intervention period could potentially have been a worthwhile addition.</p>



Ques No.	Yes	Can't Tell	No	Comments
8				<p>(This section is focused on the third phase of the study – the mealtime intervention)</p> <p>The adherence to the treatment protocols ('treatment integrity') was extremely variable, both between the caregivers of the different children and between the different components of the behavioural intervention. 2 of the 3 caregivers found the treatment to be acceptable, however assessments were not conducted with 1 child as he did not complete the entire study.</p> <p>For all of the 3 children, the percentage of non-preferred foods eaten increased, such that all children were reportedly consuming the entire proportion of non-preferred foods. Play behaviours decreased in 2 of the 3 children (11.5 – 15% decrease), as did elopement; however the improvement for 1 child was marginal (0.6 – 13.5% decrease). Food refusal only decreased for 1 child (8.5% decrease), remained stable in another (0.2% increase), yet increased greatly (56.9% increase) for the third child. Expulsions remained relatively stable.</p> <p>Much data was not available for 1 child as he did not complete the entire study, however it should be noted that this was the child that recorded the large increase in food refusal.</p>
9				There is no information presented as to the statistical significance or otherwise of the behaviour changes occurring during the treatment period.
10		✓		The authors contend that the intervention improves mealtime behaviour, however due to the variability of the results, this is hard to determine. Notable improvements were recorded with respect to play behaviours and the consumption of non-preferred food, however there was considerable variability in the size of some effects (eg food refusal and elopement), and little change for others (eg expulsions). The sample is also particularly small, and thus whether the same results could be achieved across a larger sample is questionable. The results are also potentially skewed as one subject did not complete the entire study. Moreover, whether the results would be different with increased treatment integrity is unclear.
11			✓	The sample is exceptionally small, and thus the extent to which any of the results may be extrapolated to different local populations is limited. It should also be noted that this was a targeted intervention – that a program was devised in response to earlier observational assessment of mealtime behaviour. Whilst such behavioural problems are likely to be common amongst all children, other specific problem behaviours may have been overlooked that are of particular relevance to other settings.
12		✓		The authors note that there is little available literature investigating mealtime interventions in the home environment; indeed, most have been in a specific therapy environment (p.222), and in populations of disabled children (p.211). However, it is not explicitly reported whether mealtime behavioural interventions were successful.