Psychometric Evaluation of the 'Evidence Based Practice Competencies Questionnaire - Cerebral Palsy'

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Title: Psychometric evaluation of the 'Evidence Based Practice Competencies Questionnaire

– Cerebral Palsy'

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Abstract

Aim: To understand whether knowledge translation activities are effective, good measurement of practice is required. This study investigated the psychometric properties of a self-report measure of allied health practitioner (AHP) evidence-based behaviours when working with children with cerebral palsy.

Methods: Construct validity and reliability studies were undertaken for the 12-item Evidence Based Practice Competency Questionnaire – Cerebral Palsy (EBP-CQ-CP) using the Consensus-based Standards of Measurement Instruments methods. Factor analysis tested construct validity. Weighted Kappa tested chance-corrected agreement for each item and intra-class correlation coefficients (ICC) the reliability of factors derived in the validity study.

Results: In the validity study 259 AHP completed the EBP-CQ-CP on occasion 1, and 228 on occasion 2. In the reliability study 46 pairs of AHP completed the questionnaire twice. Exploratory factor analysis determined the EBP-CQ-CP contained two scales: 'communicating evidence based expectations' and 'evidence based assessment practices'. Confirmatory factor analysis using data from the second occasion of assessment supported the findings.

Excellent consistency in ratings across factor scores were obtained from 46 pairs of raters: Factor 1, ICC=0.93 (95%Confidence Interval 0.88-0.96); Factor 2, ICC=0.94 (95% Confidence Interval 0.88-0.97).

Conclusions: This study supports the interpretation of the EBP-CQ-CP in a clinically meaningful and psychometrically robust manner.

Keywords: psychometrics, questionnaire, allied health professional, cerebral palsy, evidence based practice

Introduction

Evidence based health care is applicable to all settings and professionals. Evidence based practice (EBP) is defined as the judicious and conscientious use of current best research evidence together with clinical expertise, client preferences and setting resources at the point of clinical decision making (Sackett, 2000). EBP is designed to increase the probability that clients will receive the most effective intervention or service, in the most timely and cost-effective manner for the best clinical outcomes. Although EBP is considered standard care, there is a known research-practice gap that results in significant delay between generation of useful new knowledge and implementation of changed practice that integrates that knowledge (Hammel, Finlayson, Kielhofner, Helfrich, & Peterson, 2001). The field of knowledge translation (KT) science has evolved to address this gap, providing us with methods for studying the processes and outcomes of 'interventions' aimed at closing the research practice gap (Campbell, Novak, McIntyre, & Lord, 2013). Knowing whether KT interventions are effective requires valid and reliable measurement of the primary outcome sought.

Cerebral palsy is a permanent disorder of the brain that results in impaired movement and posture and associated activity limitations, including those related to motor, intellectual, sensory or behavioural difficulties, and secondary musculoskeletal impairment (Rosenbaum, Paneth, Leviton, Goldstein, & Bax, 2007). The current evidence base in cerebral palsy provides international standards in relation to routine use of functional classification tools, including the Gross Motor Function Classification System (Palisano, Rosenbaum, Bartlett, & Livingston, 2008), the Manual Ability Classification System (Eliasson et al., 2006) and Communication Function Classification System (Hidecker et al., 2011), and regular clinical assessment to track potentially increasing musculoskeletal impairment (Hagglund et al., 2014; Hägglund et al., 2005), as well as individualised, client-centred, goal-focused intervention decision-making (King, Teplicky, King, & Rosenbaum, 2004; Novak et al.,

2013). These standards are based on established evidences of their important role in improving the clinical outcomes of children with cerebral palsy (Hagglund et al., 2014; Hägglund et al., 2005). Our team have undertaken a study investigating the efficacy of a multi-strategy KT approach to improve the implementation of routine clinical assessments in the delivery of allied health professional (AHP) services. One outcome of interest was that of changed assessment practices by participating AHP.

Changes in practice behaviours can be measured using a variety of methods including objective structured clinical examinations, chart audits, or through self-report measures. Clinical examinations are more commonly used in educational settings than practice settings, being complex to structure and implement in a busy work environment. Chart audits are effective, but time consuming. Thus a self-report approach to measurement was sought that would provide opportunity for participants to report on their perceived frequency of use of a range of evidence based practices undertaken with children with cerebral palsy.

A previous KT study with AHP who worked with children with cerebral palsy used the 'Evidence Based Practice Competencies Questionnaire-Cerebral Palsy (EBP-CQ-CP) to evaluate change in evidence based practice behaviours of AHP working with this population (Campbell et al., 2013). The EBP-CQ-CP was developed by a multidisciplinary panel of experts and has 12 items detailing goal-setting, evidence based practice and outcome measurement competencies relevant to clinical practice with children with cerebral palsy. Respondents self-rate the frequency with which they undertake each of the items/behaviours in their current clinical practice. Five response options are available for each item: 0-5% of the time, 6-24% of the time, 25-49% of the time, 50-74% of the time or 75-100% of the time. Original scoring of the EBP-CQ-CP applied a Goal Attainment Scaling (GAS; Kiresuk and Sherman, 1968) approach and then conversion of raw GAS scores to T-scores for analysis (Campbell et al., 2013). Using GAS assumes that individuals' 'current level of performance'

was the first GAS level (0-5% of the time) at the beginning of the study, however when this is not the case the rationale for the approach is somewhat undermined.

The EBP-CQ-CP may be a useful tool to help evaluate the clinical behaviours of AHP working in the cerebral palsy field; however evaluation of the psychometric properties of the tool has not been reported to date. This study aimed to evaluate the construct validity and intra-rater reliability of the EBP-CQ-CP. Our research questions were;

1. Do questions contained within the EBP-CQ-CP form one or more factors describing evidence based assessment practices?

2. What level of consistency and agreement are evident within raters who complete the EBP-CQ-CP on two occasions within a two-week time frame when no change in practice is anticipated?

Methods

Ethical approval was granted from the Human Research Ethics Committee at Australian Catholic University (Ethics register numbers 2012 309V and 2015-99E) and the Cerebral Palsy Alliance Research Ethics Committee (Ethics register number 20113-04-02).

Research design

This study followed measurement-study design principles described by the Consensus-based Standards for the selection of health Measurement Instruments (COSMIN) and was conducted in two parts (Mokkink et al., 2010). In part 1, construct validity was assessed using exploratory factor analyses and confirmatory factor analyses to understand the dimensionality

of the scale. In part 2, intra-rater reliability was assessed using survey data collection methods (Terwee et al., 2012).

Participants

Part 1: Construct validity. Data were collected as part of an ongoing study evaluating the efficacy of a multi-strategy KT intervention in improving AHP research implementation behaviours (Imms et al., 2015). Participants in the KT study were occupational therapists, physiotherapists and speech pathologists employed in five healthcare organisations in Australia that worked, or had the potential to work, with children with cerebral palsy. All participants provided informed consent.

Part 2: Intra-rater reliability study. Occupational therapists, physiotherapists and speech pathologists who work with children with cerebral palsy were eligible to participate. In line with COSMIN guidelines for sample size in reliability studies, we aimed to recruit 80-100 participants (Mokkink et al., 2010).

Procedure

Part 1: Construct validity. Participating AHP each generated a unique alphanumeric identification code and then completed a hard copy version of the EBP-CQ-CP during a professional development day held at their employing organisation (reported as survey 1 in this paper). Six months later a second hard copy EBP-CQ-CP was completed by participating AHP (survey 2). Demographic details of respondents were also collected at each data collection point.

Part 2: Intra-rater reliability. Participants were recruited via advertisements on websites, social media, and newsletters associated with AHP professional bodies in Australia. Snowball sampling from one participant to another was employed and resulted in both Australian and international respondents. Participants were asked to complete a short online survey (created using Qualtrics software (Qualtrics, 2015)) on two occasions two weeks apart. The first occasion (reported as survey 3) included the EBP-CQ-CP items and demographic details of the respondents; the second occasion (survey 4) was simply the EBP-CQ-CP. In each instance, a progress bar indicated the approximate percent completion of the survey as respondents progressed through the questions. Respondents could review previous questions and change their responses prior to completion. Participants provided their email address so that their survey responses on each occasion could be linked. An automatically generated email provided participants with a link to the second survey two weeks after the date of completion of the first survey. A two week time period was selected to minimise the possibility of participants simply remembering the responses they provided to the first survey, and to be not long enough for their clinical practice to have changed. An additional reminder email containing a link to the survey was issued three weeks after the date of the first occasion of completion to maximise the number of participants who responded on both occasions.

Data Analysis

Part 1: Construct validity. To address question 1, an exploratory factor analysis was conducted using data from survey 1 to determine whether the 12 items from the EPB-CQ-CP loaded onto similar factors. The exploratory factor analysis was conducted using an oblique rotation with the promax method, which assumes the factors are correlated. Internal

consistency was assessed using Cronbach's alphas. A confirmatory factor analysis was then conducted to determine whether the data from survey 2 confirmed the factors found with the exploratory factor analysis. The factor analyses and assessment of internal consistency were all conducted using Stata Release 14.0 (StataCorp, 2015). The overall aim was to produce total scores for each factor should they emerge. The total score(s) would be calculated by summing the component item scores. Each item was scored 1, 2, 3, 4 or 5, indicative of the practice occurring 0-5% of the time, 6-24% of the time, 25-49% of the time, 50-74% of the time or 75-100% of the time respectively.

Part 2: Intra-rater reliability. To address question 2, data pertaining to the reliability study were imported from Qualtrics and questionnaire responses linked using participants' email addresses. Participant characteristics were summarised using descriptive statistics and frequency counts. Cross-tabulations and the linear weighted kappa statistic (κlw) were used to evaluate agreement on paired EBP-CQ-CP item responses on the first and second occasions of completion (surveys 3 and 4). The standards on strength of agreement set by Landis and Koch (Landis & Koch, 1977) were used to interpret the statistical output: κlw values between 0.41 and 0.60 infer moderate agreement; 0.61 - 0.80 infer substantial agreement, and 0.81 - 1.00 indicates almost perfect agreement. Consistency in ratings across derived factor scores was assessed using the intra-class correlation coefficient (ICC), with interpretation using the standards detailed by Cicchetti (1994): <0.40 poor, 0.40-0.59, fair, 0.60-0.74, good, 0.75-1.0, excellent. Statistical analysis was performed using Stata Release 14.0 (StataCorp, 2015) and the Kappa command: kapci.

Results

Participant characteristics

A total of 259 participants completed the EBP-CQ-CP survey 1 and 228 survey 2, providing data for the construct validity component of the study. Of these, 159 completed both surveys. For the reliability component, 79 AHP completed survey 3, of whom 47 (59%) also completed survey 4. A total of 46 paired datasets were eligible for analyses: one was excluded due to differences in the linking data provided at completion of the first and second surveys. Participant characteristics are summarised in Table 1.

[insert Table 1 about here]

Exploratory Factor Analysis Results

Of the 259 AHP who completed survey 1, data from 258 participants (with no missing data) were used in the exploratory factor analysis. The study had a sufficient sample size, observations-to-variables ratio, and correlations between items (ranging from r=0.23, p<0.001, to r=0.83, p<0.001) to conduct the analysis (MacCallum, Widaman, Preacher, & Hong, 2001; Brown, 2015). The results indicated that the 12 items loaded onto two factors (see Table 2). Two factors were identified with Eigenvalues greater than 1 as Factor 1 (4.87) and Factor 2 (1.15) from an iterated principal factor method then an oblique rotation to allow for possible correlated factors, with an adequate fit to the data (Kaiser-Meyer-Olkin measure of sampling adequacy = 0.868; Bartlett's test of sphericity, $\chi2$ = 1509.34, df=66, p<0.001). Question 1 (goals) loaded lower than other items (0.342) but was included in Factor 1. The internal consistency analysis using Cronbach's alpha demonstrated good internal consistency for both factor 1 (α= 0.863) and factor 2 (α= 0.824).

Factor 1 includes 5 question items (items 2, 3, 4, 5 and 6) and focused on conducting and, importantly, documenting outcome measures and classification systems so that the information can be used to assist with service planning, decision-making and describing expected outcomes. This factor was deemed to represent AHP frequency of communicating evidence based expectations. Factor 2 includes 7 question items (items 1, 7, 8, 9, 10, 11 and 12) and was considered to represent AHP frequency of undertaking evidence based assessment practices as the question items related to use of assessment information, setting and achievement of goals and use of outcome measures. The communicate evidence based expectations factor had a mean of 13.7 (SD=6.4, range= 5 to 25), with larger values indicating higher frequency of performing these competencies. The evidence based assessment practices factor had a mean of 26.3 (SD=5.5, range= 10 to 35), with larger values indicating higher frequency of utilising evidence based assessments in practice.

[insert Table 2 about here]

Confirmatory Factor Analysis Results

Of the 228 AHP who completed survey 2, data from 213 participants (with no missing data) were used in the confirmatory factor analysis. The results of the confirmatory factor analysis indicated that the 12 items loaded on 2 factors similarly to that found in the exploratory analysis. Eigenvalues (>1) were 5.24 (factor 1) and 1.20 (factor 2). Following iterated principal factor method and an oblique rotation, the statistics indicated an adequate fit to the data (Kaiser-Meyer-Olkin measure of sampling adequacy = 0.861; Bartlett's test of sphericity, $\chi2 = 1449.72$, df=66, p<0.001). In this analysis, question item 11 (Evidence Based Practice Approach) loaded at a lower value than other items and could have loaded on

either factor, but was included in Factor 2 as its loading was slightly higher (0.4174 and 0.4266 respectively) and seemed more plausible.

Using survey 2 data, Cronbach's alpha for both factor 1 (α= 0.862) and factor 2 (α= 0.854) demonstrated good internal consistency. Factor 1, representing AHP frequency of communicating evidence based expectations, (n=213) had a mean of 14.7 (SD=6.4, range= 5 to 25). Factor 2, representing frequency of undertaking evidence based assessment practices (n=213) had a mean of 27.7 (SD=5.5, range= 10 to 35).

Intra-rater reliability: EBP-CQ-CP individual items

The percentages of absolute agreement on items in the EBP-CQ-CP, calculated from the 46 paired responses to surveys 3 and 4, varied from 50% to 82.6% and are detailed in Table 3. Four of the twelve items displayed moderate concordance between surveys; substantial agreement was noted for seven items, and one item had almost perfect agreement, as denoted by the κlw values in Table 3. The moderate to substantial agreement in individual item responses between survey 3 and survey 4 suggest that the EBP-CQ-CP has adequate reliability.

[insert Table 3 about here]

Intra-rater reliability: EBP-CQ-CP factors

Excellent consistency in ratings across the two factor scores obtained from surveys 3 and 4 were observed (Factor 1, ICC=0.93 (95% Confidence Interval 0.88-0.96); Factor 2, ICC=0.94 (95% Confidence Interval 0.88-0.97)). The high ICC's for each factor suggests that

participants were consistent in their responses within the two identified factors during the two week study period. This consistency of response when no change was anticipated, confirms the reliability of the EBP-CQ-CP.

Discussion

This study provides evidence about the psychometric properties of the EBP-CQ-CP for use in measuring AHP evidence based assessment practices in knowledge translation research. Strong evidence was found that the EBP-CQ-CP reliably measures AHP self-reported behaviours according to two constructs: communicating evidence based expectations and evidence based assessment practices when working with children with cerebral palsy. These two factors are both statistically and clinically coherent, describing different facets of evidence based behaviour. As such, the EBP-CQ-CP can provide a mechanism for identifying where AHP may be less active in implementing evidence based practices. This information could be used to appropriately target interventions for AHP in order to enhance uptake of 'less active' evidence based practices.

The EBP-CQ-CP has been designed for AHP providing services to people with cerebral palsy. The tool is distinct from many other measures of health professional evidence based practices as it is focused on self-report behaviours, as opposed to knowledge, skills and attitudes that are more commonly assessed (Ilic, 2009). Gathering information about evidence based behaviours in clinical practice can provide complementary information - indeed important information – as knowing that AHP have the knowledge and skills to be evidence based practitioners, doesn't mean they act in evidence based ways.

Because the EBP-CQ-CP distinguishes implementing evidence based practices from communicating evidence based practices it provides an opportunity to identify where services and practices may be strengthened. Although this study did not aim to investigate the extent to which practitioners undertook these two evidence based practices, the mean scores for each scale (i.e. 13.7/25 communicating evidence based expectations and 26.3/35 evidence based assessment practices at survey 1, suggest that these AHP undertook evidence based assessments with higher frequency than they communicated evidence based expectations. When there is low frequency of implementing evidence based practices, barriers may be addressed through increased practical resources (e.g. staffing, equipment, practitioner knowledge and technique). Building strengths in practitioner-client evidence based communication and shared decision making however, may require development of practitioner and consumer skills in health communication. Communicating evidence based expectations can be challenging for a variety of reasons. Prior research has highlighted the role of practitioner knowledge and experience, a lack of access to evidence based data, inappropriate clinical education, and potential barriers related to client beliefs and requests for particular practices (Haines, Kuruvilla, & Borchert, 2004; Sitzia, 2002). Enhanced professional development for practitioners and for families and those with cerebral palsy, about how to have evidence based conversations is likely to be warranted.

Strengths and limitations

The sample size was adequate for the construct validation part of the study, and agreement between the exploratory and confirmatory factor analysis despite a 6 month interval in the data collection period lends strength to the findings. There were fewer than 80 pairs of responses in the reliability component, thus these findings may be less robust. Despite this, sampling across Australia and the international community suggests the tool may have relevance to an international AHP audience. Total scores on the two derived scales were

calculated by simple summation however this assumed that the items were of equal weight. Further evaluation of the tool should investigate the validity of this assumption. Finally, it is important to remember that the two scales derived within this study measure AHP self-reported evidence based practice behaviours, that is, clinician perceptions of what they do. These perceptions may not reflect actual behaviour in practice as such proxy measures of behaviour are not without limitations (Hrisos, Eccles, Francis et al, 2009).

Implications for research and practice

The EBP-CQ-CP has been designed to be valid for AHP providing services to people with cerebral palsy although there are only two questions within the tool that specifically limit its application to broader populations. Further adaptations and investigation of the questionnaire would be required to extend its use. Further psychometric development of the tool should also consider application of item response theory (Bond & Fox, 2007) to test the uni-dimensionality of the scales derived using factor analysis in this study (Brown, 2015). From a clinical practice perspective, strategies to address limitations in either evidence based assessment practices or communication of evidence based expectations differ substantially. Use of the EBP-CQ-CP in clinical practice may identify specific limitations in AHP evidence based behaviours permitting targeted intervention strategies to be put in place.

Conclusions

The evidence from this study supports the interpretation of the EBP-CQ-CP in a manner that is clinically meaningful and psychometrically robust. Gathering data about AHP evidence based behaviours using a tool such as the EBP-CQ-CP, in combination with measures of

knowledge, skills and attitudes and any resultant change in clinical outcomes is required to establish clear evidence of changing practices.

List of abbreviations

EBP = Evidence based practice

AHP = Allied health professionals

KT = knowledge translation

EBP-CQ-CP = Evidence based practice competency questionnaire – cerebral palsy

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Declaration of Interest

The authors report no conflicts of interest.

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Table 1. Characteristics of participants of the construct validity and reliability study

Characteristic	Construct validity Survey 1 (n = 259)	Construct validity Survey 2 (n = 228)	Reliability study (n = 46)
Allied Health Profession **n (%)**			
Occupational Therapy	107 (41.3)	95 (41.7)	10 (21.7)
Physiotherapy	82 (31.7)	63 (27.6)	29 (63.0)
Speech Pathology	69 (26.6)	70 (30.7)	7 (15.3)
Missing data	1 (0.4)	0	0
Highest level of education **n (%)**			
Professional practice degree only	191 (73.7)	164 (71.9)	23 (50.0)
Postgraduate certificate or diploma	36 (13.9)	28 (12.3)	6 (13.1)
Masters degree	27 (10.4)	33 (14.5)	15 (32.6)
Doctoral degree (PhD or Clin Doc)	3 (1.2)	1 (0.4)	2 (4.3)
Missing data	2 (0.8)	2 (0.9)	0(0.0)
Years since graduation **Mean (SD)**	12.2 (10.7)	11.3 (10.5)	19.1 (11.4)
Missing data	1 (0.4)	6 (2.6)	0
Years practicing in disability field **Mean (SD)**	10.4 (9.4)	10.3 (9.5)	15.4 (10.1)
Missing data	0	2 (0.9)	0
Self-nominated expertise in paediatric rehabilitation **n (%)**			
Novice	52 (20.1)	41 (18.0)	4 (8.7)
Intermediate	148 (57.1)	141 (61.8)	16 (34.8)
Expert	55 (21.2)	46 (20.2)	26 (56.5)
Missing data	4 (1.6)	0	0
Gender			
Male	N/C	N/C	4 (8.7)
Female			42 (91.3)
Age (years)			
≤29	N/C	N/C	5 (10.9)
30 – 39			14 (30.4)
40 – 49			10 (21.8)
50 – 59			14 (30.4)
≥60			3 (6.5)
Location of practice			
Europe	0	0	26 (56.5)
North America	0	0	1 (2.2)
Australia or New Zealand	259 (100)	228 (100)	19 (41.3)
English as first language			
Yes	241 (93.1)	211 (92.5)	24 (52.2)
No	12 (4.6)	4 (1.8)	22 (47.8)
Missing data	6 (2.3)	13 (5.7)	0

n, number; PhD, Doctor of Philosophy; Clin Doc, Clinical Doctorate; SD, standard deviation; N/C = not collected. Gender was not collected in the larger study as in small organisations it might serve to identify individuals

Table 2. Oblique rotation factor loadings for each 12 EBP-CQ-CP data from survey 1 and 2

EBP-CQ-CP individual items	EFA (n= 258)		CFA (n = 213)	
	Factor 1	Factor 2	Factor 1	Factor 2
1 I develop and document measurable goals with families/clients	0.1560	**0.3418**	0.1039	**0.6002**
2 I conduct and document COPM interviews with families/clients to assist with service planning	**0.8843**	0.0142	**0.8861**	-0.0041
3 I construct and document GAS scales to describe the expected outcome from intervention for families/clients	**0.7536**	0.0549	**0.7396**	0.0903
4 I score and document my client's COPM and GAS measures and use this information for planning	**0.8610**	0.0061	**0.8830**	-0.0385
5 I determine and document my client's GMFCS, MACS or CFCS level to help inform decision-making	**0.4180**	0.2358	**0.5116**	0.2390
6 I ask parents/clients to consent to joining the CP register and notify them to the register	**0.5328**	0.2197	**0.4105**	0.2900
7 I communicate news or facts to families/clients, to help them develop realistic expectations from intervention	-0.1204	**0.6339**	-0.0041	**0.6635**
8 I identify if a goal (in my speciality) is realistic based on assessment information and prognostic evidence	0.0208	**0.7552**	-0.0625	**0.7589**
9 I reword goals with families/clients to be realistic, if they set goals that are unrealistic	-0.0005	**0.6530**	-0.0176	**0.7095**
10 I check what interventions (in my speciality) have higher levels of supporting evidence	0.2029	**0.6513**	0.3458	**0.5487**
11 I select interventions with the highest levels of evidence that match the goals identified by my families/clients using a systematic EBP approach	0.2704	**0.5786**	0.4174	**0.4266**
12 I communicate the outcomes of intervention to families/clients using outcome measures, even when goals aren't achieved	0.2830	**0.4453**	0.1846	**0.6216**

Note: Bold type indicates which factor individual items loaded to. EFA = exploratory factor analysis; CFA = confirmatory factor analysis; COPM = Canadian Occupational Performance Measure; GAS = Goal Attainment Scale; GMFCS = Gross Motor Function Classification Scale; MACS = Manual Ability Classification Scale; CFCS = Communication Function Classification Scale; EBP = evidence based practice; blank rows loading values were <0.3; Survey 1 factors obtained from exploratory factor analysis (n=258); Survey 2 factors obtained from confirmatory factor analysis (n=213).

Table 3. Absolute agreement and chance-corrected agreement for individual items on the

EBQ-CQ-CP

EBP-CQ-CP item and description		Absolute agreement (%)		Linear Weighted Kappa (95% CI)	
1	I develop and document measurable goals with families/clients	29/46	(63.0%)	0.61	(0.45 to 0.78)
2	I conduct and document COPM interviews with families/clients to assist with service planning	36/44	(81.8%)	0.65	(0.43 to 0.85)
3	I construct and document GAS scales to describe the expected outcome from intervention for families/clients	33/45	(73.3%)	0.80	(0.69 to 0.89)
4	I score and document my client's COPM and GAS measures and use this information for planning	29/46	(63.0%)	0.58	(0.35 to 0.75)
5	I determine and document my client's GMFCS, MACS or CFCS level to help inform decision-making	31/46	(67.4%)	0.77	(0.64 to 0.88)
6	I ask parents/clients to consent to joining the CP register and notify them to the register	38/46	(82.6%)	0.83	(0.67 to 0.94)
7	I communicate news or facts to families/clients, to help them develop realistic expectations from intervention	23/46	(50.0%)	0.42	(0.24 to 0.58)
8	I identify if a goal (in my speciality) is realistic based on assessment information and prognostic evidence	28/46	(60.9%)	0.52	(0.31 to 0.75)
9	I reword goals with families/clients to be realistic, if they set goals that are unrealistic	29/45	(64.4%)	0.54	(0.33 to 0.74)
10	I check what interventions (in my speciality) have higher levels of supporting evidence	26/46	(56.5%)	0.65	(0.51 to 0.78)
11	I select interventions with the highest levels of evidence that match the goals identified by my families/clients using a systematic EBP approach	29/45	(64.4%)	0.75	(0.64 to 0.86)
12	I communicate the outcomes of intervention to families/clients using outcome measures, even when goals aren't achieved	32/46	(69.6%)	0.62	(0.44 to 0.80)

CI, confidence interval