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Introduction

The National Clinical Audit of Anxiety and Depression performed a Spotlight audit relating to Psychological Therapies. As part of the audit, the data for some patients were collected twice by two different raters. The objective of the analysis in this report is to examine the inter-rater agreement for the data collected.

Statistical methods

All analysis examined the strength of the inter-rater agreement for a number of the audit measures. The method of analysis was dependent on the nature of the data collected. Continuous variables were analysed using the intra-class correlation (ICC), whilst categorical variables were analysed using the kappa method. In addition to the calculated values, the uncertainty in each measurement was indicated by calculating a corresponding confidence interval.

The ICC method divides the total variation in the measurements from both raters combined into two sources, that due to variation between patients, and that due to variation within patients (due to repeat measurements by the two raters). The ICC is the proportion of the total variation that is due to variation between patients. If the agreement is good there should be little within-patient variation, with most variation between-patients, resulting in an ICC value close to 1.

For the categorical variables, the kappa statistic measures the agreement over and above that which would be expected due to chance. This is measured on a scale ranging up to a maximum agreement of 1.

Although the kappa and ICC methods both score agreement on a scale up to 1, ICC methods do not have a maximum agreement of 1.491 0 5

Results

a) Demographic variables

Other disability (Q7)	401	0.67 (0.57, 0.77)
Problem therapy offered for (Q9)	784	0.65 (0.62, 0.68)

(#) Unable to calculate confidence interval as no occurrences of speech disability for either measurement

The specific level of agreement varied for the different variables. However, the majority of kappa values were over 0.6, suggesting good agreement between the raters.

Agreement between raters was assessed for the patient diagnoses, with the results summarised in Table 4. Each patient had only one primary diagnosis, so only one analysis was performed for this variable. However, patients could have multiple secondary diagnoses, and so separate analyses was performed for each of these.

Table 4: Primary and secondary diagnosis

Diagnosis	n	Kappa (95% CI)
Primary diagnosis	724	0.71 (0.69, 0.74)
<u>Secondary diagnoses</u>		
Bipolar affective disorder	745	0.54 (0.47, 0.61)
Mild depressive episode	745	0.36 (0.29, 0.43)
Moderate depressive episode	745	0.35 (0.28, 0.42)
Sever depressive episode		

(#) Unable to calculate confidence interval as no occurrences of specific isolated phobias for either measurement

b) Appointment dates and therapy attendance

The next set of analyses examined the inter-rater agreement for the appointment dates and attendance to receive different types of therapy

Within this section, only one variable, the date of referral, was measurement a continuous scale. The results, including the ICC value are summarised in Table 5.

Table 5: Date of referral to therapy

Question	n	ICC (95% CI)
Date of referral (Q10)	762	0.75 (0.972, 0.78)

The data suggested only moderate agreement between the observers for the date of referral.

Agreement was also assessed for the therapy received. Initially this was assessed for the type of therapy (individual, couples etc.). Patients could receive more than one type of this therapy, and so a separate analysis was performed for each type. Additionally, analyses were performed for whether the patient received each individual type of therapy or not. For these analyses, a single analysis was performed irrespective of the manner in which this was delivered. In other words, the therapy could be individual, group or couples/family. The analysis results are summarised in Table 6.

Table 6: Therapy received

Therapy	n	Kappa (95% CI)
Individual	792	0.81 (0.74, 0.88)
Group	792	0.87 (0.80, 0.94)
Couples / Family	792	0.74 (0.67, 0.81)
Acceptance and commitment	792	0.66 (0.59, 0.73)
Applied relaxation	792	0.53 (0.57, 0.60)
Arts psychotherapies	792	0.86 (0.78, 0.93)
Behaviour activation	792	0.48 (0.41, 0.55)
Behaviour couples therapy	792	0.00 (-0.07, 0.06)
Cognitive analytic therapy	792	0.82 (0.75, 0.89)
Cognitive behaviour therapy	792	0.70 (0.63, 0.77)
Compassion focused therapy	792	0.69 (0.62, 0.76)
Counselling	792	0.53 (0.46, 0.60)
Dialectical behaviour therapy	792	0.68 (0.61, 0.75)
Dynamic interpersonal therapy	792	0.67 (0.60, 0.73)
Eye movement reprocessing	792	0.87 (0.80, 0.94)
Facilitated cognitive therapy	792	0.63 (0.56, 0.70)
Guided / supported self-help	792	0.62 (0.56, 0.69)
Humanistic therapy	792	0.51 (0.44, 0.57)

Interpersonal psychotherapy

c) Individual therapy

The next analyses focussed on the delivery of individual therapy.

The results for the continuous measures are summarised in Table 7. Due to the positively skewed distribution of the number of sessions, this variable was analysed on the log scale.

Table 7: Continuous individual therapy variables

Variable	n	ICC (95% CI)
Date first appointment (Q12)	638	0.48 (0.42, 0.54)
Date of first treatment (Q14)	567	0.83 (0.81, 0.86)
Date of last treatment (Q15)	566	0.12 (0.03, 0.20)
Number of sessions (Q16) ^(*)	648	0.90 (0.89, 0.92)

(*) Variable analysed on the log scale

The results suggested good agreement between raters for the number of sessions and the date of the first treatment. However, there was poor agreement for the date of the first appointment and the date of last treatment.

The results for the categorical measures are summarised in Table 8.

Table 9

