

Emotion Recognition Questionnaire

Grade 2/Year 3

Fast Track Project Technical Report

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SAS scoring program

Citations

Instrument

Ribordy, S.C., Camras, L.A., Stefani, R., & Spaccarelli, S. (1988). Vignettes for emotion recognition research and affective therapy with children. *Journal of Clinical Child Psychology, 17*, 322-325.

Reports

Rains, C. (2003). *Emotion Recognition Questionnaire*. (Fast Track Project Technical Report). Available from the Fast Track Project website: <http://www.fasttrackproject.org>

Hilsman, R. (1996). *Emotion Recognition Questionnaire*. (Fast Track Project Technical Report). Nashville, TN: Vanderbilt University.

Data Source

Raw: C3C_ER

Scored: ERQ3

I. Scale Description

The Emotion Recognition Questionnaire is adapted from vignettes created for emotion recognition research and therapy by Ribordy et al. (1988). The questionnaire used by the Fast Track Project consists of 16 items, with four vignettes for each of four emotions—happiness, sadness, anger, and fear. The questionnaire, which was administered as part of the summer child interview, was completed for all three cohorts during the first three years of the study. The administration procedure for this measure was also adapted by having a nonverbal response mode. The interviewer first ascertained that the child could identify the emotion depicted in each of four drawings—happy, sad, anger, and afraid. Then, the interviewer would read each vignette to the child and the child would choose the emotion responses for the child in the story (gender specific) by selecting a drawing of one of the four facial expressions.

II. Report Sample

These analyses were conducted on the first cohort on the high-risk control sample (n = 155) and the normative sample (n = 387, N = 463 with overlap) from the third year of the study. Thirty-eight records were missing the complete measure. Thirteen records were missing from the high-risk control sample (4 from Durham, 2 from Nashville, 3 from Pennsylvania, and 4 from Washington) and 31 records

were missing from the normative sample (6 from Durham, 10 from Nashville, 7 from Pennsylvania, and 8 from Washington). These numbers may reflect some overlap between the two samples.

III. Scaling

All of the variables are first converted to dichotomous scores (correct vs. incorrect identification of the intended emotion) for each scenario. The subscales then are created using these dichotomous variables.

There are four subscales of the Emotion Recognition Questionnaire—*Happy*, *Sad*, *Angry*, and *Afraid*. Subscale scores are simply the mean of correct responses, which can range from 0 to 4. A total scale score is also computed as the mean of all correct items, with a possible range of 0 to 16. “Don’t know” or no responses are scored as incorrect responses; thus, the only missing data on the measure is for uncompleted questionnaires.

Cronbach’s alphas were calculated for each score and can be seen in the following table:

Subscales	Cronbach's Alpha	
	High-Risk Control Sample	Normative Sample
Number Afraid Correct (ERQ3NAF)	.61	.71
Number Angry Correct (ERQ3NAN)	.35	.40
Number Happy Correct (ERQ3NHP)	.27	.05
Number Sad Correct (ERQ3NSD)	.34	.36
Total Number Correct (ERQ3TNC)	.44	.49

Four of the scales indicated a lower level of internal reliability for both the high-risk control sample and the normative sample. These scales were the *Number Angry Correct*, the *Number Happy Correct*, the *Number Sad Correct*, and the *Total Number Correct*.

IV. Differences between Groups

A series of t-tests between the high-risk control sample (not including the overlap) and the normative sample indicated significant differences for three subscales, the *Number Afraid Correct*, the *Number Sad Correct*, and the *Total Number Correct*, with the normative sample scoring higher than the control sample for three scores.

Comparison of Means for Normative and Control for ERQ Y3								
Variable	Label	Normative		Control		DF	t Value	Pr > t
		Mean	Std Dev	Mean	Std Dev			
ERQ3NAF	# Afraid correct ERQ Y3	3.71	0.75	3.55	0.85	423	-2.04	0.0423
ERQ3NAN	# Angry correct ERQ Y3	2.78	1.08	2.67	1.07	422	-0.97	0.3327
ERQ3NHP	# Happy correct ERQ Y3	3.94	0.24	3.91	0.33	421	-0.89	0.3753
ERQ3NSD	# Sad correct ERQ Y3	3.20	0.90	3.01	0.99	423	-2.08	0.0384
ERQ3TNC	Total # correct ERQ Y3	13.63	1.78	13.18	1.80	420	-2.46	0.0145

V. Recommendations for Use

Analysts should note that two of the subscales, *Number Happy Correct* and *Number Afraid Correct*, showed ceiling effects for both the normative and the high-risk control samples. The subscale *Number Happy Correct* had 94% of the normative sample and 93% of the high-risk control sample scoring a 4 on this scale, which was the highest possible score. The subscale *Number Afraid Correct* had 81% of the normative sample and 71% of the high-risk control sample scoring a 4 on this scale, which was the highest possible score.

Analysts should consider either analyzing each emotion separately or combining the three negative emotions into a composite score.

VI. Item and Scale Means and SDs

ERQ Items Normative Sample

Variable	Label	N	Mean	Std Dev	Minimum	Maximum
ERQ3Q1	ERQ Ques 1 Correct? 1 = YES Y3 (Happy)	356	0.983	0.129	0.000	1.000
ERQ3Q2	ERQ Ques 2 Correct? 1 = YES Y3 (Angry)	356	0.579	0.494	0.000	1.000
ERQ3Q3	ERQ Ques 3 Correct? 1 = YES Y3 (Happy)	356	0.969	0.173	0.000	1.000
ERQ3Q4	ERQ Ques 4 Correct? 1 = YES Y3 (Sad)	356	0.713	0.453	0.000	1.000
ERQ3Q5	ERQ Ques 5 Correct? 1 = YES Y3 (Happy)	356	0.980	0.139	0.000	1.000
ERQ3Q6	ERQ Ques 6 Correct? 1 = YES Y3 (Angry)	356	0.669	0.471	0.000	1.000
ERQ3Q7	ERQ Ques 7 Correct? 1 = YES Y3 (Sad)	356	0.742	0.438	0.000	1.000
ERQ3Q8	ERQ Ques 8 Correct? 1 = YES Y3 (Afraid)	356	0.874	0.333	0.000	1.000
ERQ3Q9	ERQ Ques 9 Correct? 1 = YES Y3 (Afraid)	356	0.904	0.294	0.000	1.000
ERQ3Q10	ERQ Ques 10 Correct? 1 = YES Y3 (Sad)	356	0.798	0.402	0.000	1.000
ERQ3Q11	ERQ Ques 11 Correct? 1 = YES Y3 (Happy)	356	1.000	0.000	1.000	1.000
ERQ3Q12	ERQ Ques 12 Correct? 1 = YES Y3 (Afraid)	356	0.927	0.261	0.000	1.000
ERQ3Q13	ERQ Ques 13 Correct? 1 = YES Y3 (Afraid)	356	0.963	0.188	0.000	1.000
ERQ3Q14	ERQ Ques 14 Correct? 1 = YES Y3 (Angry)	356	0.868	0.339	0.000	1.000
ERQ3Q15	ERQ Ques 15 Correct? 1 = YES Y3 (Angry)	356	0.646	0.479	0.000	1.000
ERQ3Q16	ERQ Ques 16 Correct? 1 = YES Y3 (Sad)	356	0.916	0.278	0.000	1.000

ERQ Items Control Sample

Variable	Label	N	Mean	Std Dev	Minimum	Maximum
ERQ3Q1	ERQ Ques 1 Correct? 1 = YES Y3 (Happy)	142	0.965	0.185	0.000	1.000
ERQ3Q2	ERQ Ques 2 Correct? 1 = YES Y3 (Angry)	142	0.521	0.501	0.000	1.000
ERQ3Q3	ERQ Ques 3 Correct? 1 = YES Y3 (Happy)	142	0.972	0.166	0.000	1.000
ERQ3Q4	ERQ Ques 4 Correct? 1 = YES Y3 (Sad)	142	0.683	0.467	0.000	1.000
ERQ3Q5	ERQ Ques 5 Correct? 1 = YES Y3 (Happy)	142	0.979	0.144	0.000	1.000
ERQ3Q6	ERQ Ques 6 Correct? 1 = YES Y3 (Angry)	142	0.690	0.464	0.000	1.000
ERQ3Q7	ERQ Ques 7 Correct? 1 = YES Y3 (Sad)	142	0.711	0.455	0.000	1.000
ERQ3Q8	ERQ Ques 8 Correct? 1 = YES Y3 (Afraid)	142	0.796	0.405	0.000	1.000
ERQ3Q9	ERQ Ques 9 Correct? 1 = YES Y3 (Afraid)	142	0.887	0.317	0.000	1.000
ERQ3Q10	ERQ Ques 10 Correct? 1 = YES Y3 (Sad)	142	0.711	0.455	0.000	1.000
ERQ3Q11	ERQ Ques 11 Correct? 1 = YES Y3 (Happy)	142	0.993	0.084	0.000	1.000
ERQ3Q12	ERQ Ques 12 Correct? 1 = YES Y3 (Afraid)	142	0.937	0.245	0.000	1.000
ERQ3Q13	ERQ Ques 13 Correct? 1 = YES Y3 (Afraid)	142	0.930	0.257	0.000	1.000
ERQ3Q14	ERQ Ques 14 Correct? 1 = YES Y3 (Angry)	142	0.838	0.370	0.000	1.000
ERQ3Q15	ERQ Ques 15 Correct? 1 = YES Y3 (Angry)	142	0.620	0.487	0.000	1.000
ERQ3Q16	ERQ Ques 16 Correct? 1 = YES Y3 (Sad)	142	0.901	0.299	0.000	1.000

ERQ Subscales Normative Sample

Variable	Label	N	Mean	Std Dev	Minimum	Maximum
ERQ3NAF	# Afraid correct ERQ Y3	356	3.669	0.803	0.000	4.000
ERQ3NAN	# Angry correct ERQ Y3	355	2.761	1.080	0.000	4.000
ERQ3NHP	# Happy correct ERQ Y3	355	3.935	0.258	2.000	4.000
ERQ3NSD	# Sad correct ERQ Y3	356	3.169	0.931	0.000	4.000
ERQ3TNC	Total # correct ERQ Y3	354	13.528	1.839	7.000	16.000

ERQ Subscales Control Sample

Variable	Label	N	Mean	Std Dev	Minimum	Maximum
ERQ3NAF	# Afraid correct ERQ Y3	142	3.549	0.847	0.000	4.000
ERQ3NAN	# Angry correct ERQ Y3	142	2.669	1.070	0.000	4.000
ERQ3NHP	# Happy correct ERQ Y3	141	3.915	0.327	2.000	4.000
ERQ3NSD	# Sad correct ERQ Y3	142	3.007	0.986	0.000	4.000
ERQ3TNC	Total # correct ERQ Y3	141	13.177	1.798	8.000	16.000

VII. Subscale Correlations

ERQ Subscales Report Sample

Pearson Correlation Coefficients Prob > r under H0: Rho=0 Number of Observations					
	ERQ3NAF	ERQ3NAN	ERQ3NHP	ERQ3NSD	ERQ3TNC
ERQ3NAF # Afraid correct ERQ Y3	1.000 0.000 425	0.210 0.000 424	0.138 0.005 423	0.164 0.001 425	0.656 0.000 422
ERQ3NAN # Angry correct ERQ Y3	0.210 0.000 424	1.000 0.000 424	0.021 0.668 422	-0.079 0.103 424	0.645 0.000 422
ERQ3NHP # Happy correct ERQ Y3	0.138 0.005 423	0.021 0.668 422	1.000 0.000 423	0.113 0.020 423	0.282 0.000 422
ERQ3NSD # Sad correct ERQ Y3	0.164 0.001 425	-0.079 0.103 424	0.113 0.020 423	1.000 0.000 425	0.552 0.000 422
ERQ3TNC Total # correct ERQ Y3	0.656 0.000 422	0.645 0.000 422	0.282 0.000 422	0.552 0.000 422	1.000 0.000 422