

Emotion Recognition Questionnaire

Kindergarten/Year 1

Fast Track Project Technical Report

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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 web site: <http://www.fasttrackproject.org>

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

Data Source

Raw: C1C_ER

Scored: ERQ1

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 exploratory analyses were conducted on the first cohort on the high-risk sample (n = 310) and the normative sample (n = 387 with overlap, total N = 618) from the first year of the study. Three records were missing the complete measure. One record from Nashville was missing from the high-risk sample and 2 records from Durham were missing from the normative sample. These numbers may reflect some overlap between the two samples.

III. Scaling

There are four subscales of the Emotion Recognition Questionnaire—*Happy, Sad, Angry, and Afraid*. Subscale scores are simply the sum of correct responses, which can range from 0 to 4. Correct responses are when a child identifies the intended emotion for the vignette. There is also a total scale score, the sum 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 Sample	Normative Sample
Number Afraid Correct (ERQ1NAF)	.63	.65
Number Angry Correct (ERQ1NAN)	.59	.59
Number Happy Correct (ERQ1NHP)	.53	.51
Number Sad Correct (ERQ1NSD)	.61	.62
Total Number Correct (ERQ1TNC)	.60	.65

All of the scales indicated a slightly lower level of internal reliability for both the high-risk sample and the normative sample.

IV. Differences between Groups

A series of t-tests between the high-risk sample (not including the overlap) and the normative sample indicated significant differences for two subscales, the *Number Happy Correct* and the *Total Number Correct*, with the normative sample scoring higher than the control sample for both scores. The *Number Angry Correct* ($p = 0.06$) and the *Number Sad Correct* ($p = 0.06$) both approached significance, with the normative sample scoring higher than the high-risk sample for both scales. No significant differences between the control and intervention samples were found.

Emotion Recognition Questionnaire—Subscales, Normative vs. High-Risk
The TTEST Procedure

Comparison of Means for Normative and High Risk for ERQ Y1								
Variable	Label	Normative		High-Risk		DF	t Value	Pr > t
		Mean	Std Dev	Mean	Std Dev			
ERQ1NAF	# Afraid correct ERQ Y1	3.10	1.12	2.96	1.17	609	-1.42	0.1573
ERQ1NAN	# Angry correct ERQ Y1	2.02	1.32	1.82	1.32	612	-1.86	0.0629
ERQ1NHP	# Happy correct ERQ Y1	3.52	0.81	3.38	0.93	596	-2.02	0.0436
ERQ1NSD	# Sad correct ERQ Y1	2.83	1.23	2.65	1.27	612	-1.86	0.0641
ERQ1TNC	Total # correct ERQ Y1	11.48	2.74	10.81	2.65	605	-3.06	0.0023

Emotion Recognition Questionnaire—Subscales, Control vs. Intervention
The TTEST Procedure

Comparison of Means for Intervention and Control for ERQ Y1								
Variable	Label	Intervention		Control		DF	t Value	Pr > t
		Mean	Std Dev	Mean	Std Dev			
ERQ1NAF	# Afraid correct ERQ Y1	3.07	1.11	2.86	1.22	305	-1.61	0.1094
ERQ1NAN	# Angry correct ERQ Y1	1.80	1.29	1.85	1.35	306	0.32	0.7514
ERQ1NHP	# Happy correct ERQ Y1	3.36	0.97	3.39	0.89	303	0.31	0.7537
ERQ1NSD	# Sad correct ERQ Y1	2.71	1.23	2.59	1.30	306	-0.82	0.4114
ERQ1TNC	Total # correct ERQ Y1	10.95	2.52	10.68	2.77	301	-0.86	0.3897

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 samples.

The subscale *Number Happy Correct* had 66% of the normative sample and 61% of the high-risk sample scoring a 4 on this scale, which was the highest possible score. The subscale *Number Afraid Correct* had 46% of the normative sample and 42% of the high-risk sample scoring a 4 on this scale, which was the highest possible score.

VI. Item and Scale Means and SDs

ERQ Items Normative Sample

Variable	Label	N	Mean	Std Dev	Minimum	Maximum
ERQ1q1	ERQ Ques 1 Correct? 1 = YES Y1 (Happy)	385	0.818	0.386	0.000	1.000
ERQ1q2	ERQ Ques 2 Correct? 1 = YES Y1 (Angry)	385	0.390	0.488	0.000	1.000
ERQ1q3	ERQ Ques 3 Correct? 1 = YES Y1 (Happy)	385	0.847	0.361	0.000	1.000
ERQ1q4	ERQ Ques 4 Correct? 1 = YES Y1 (Sad)	385	0.649	0.478	0.000	1.000
ERQ1q5	ERQ Ques 5 Correct? 1 = YES Y1 (Happy)	385	0.896	0.306	0.000	1.000
ERQ1q6	ERQ Ques 6 Correct? 1 = YES Y1 (Angry)	385	0.483	0.500	0.000	1.000
ERQ1q7	ERQ Ques 7 Correct? 1 = YES Y1 (Sad)	385	0.639	0.481	0.000	1.000
ERQ1q8	ERQ Ques 8 Correct? 1 = YES Y1 (Afraid)	385	0.608	0.489	0.000	1.000
ERQ1q9	ERQ Ques 9 Correct? 1 = YES Y1 (Afraid)	385	0.766	0.424	0.000	1.000
ERQ1q10	ERQ Ques 10 Correct? 1 = YES Y1 (Sad)	385	0.694	0.462	0.000	1.000
ERQ1q11	ERQ Ques 11 Correct? 1 = YES Y1 (Happy)	385	0.945	0.227	0.000	1.000
ERQ1q12	ERQ Ques 12 Correct? 1 = YES Y1 (Afraid)	385	0.821	0.384	0.000	1.000
ERQ1q13	ERQ Ques 13 Correct? 1 = YES Y1 (Afraid)	385	0.821	0.384	0.000	1.000
ERQ1q14	ERQ Ques 14 Correct? 1 = YES Y1 (Angry)	385	0.626	0.485	0.000	1.000
ERQ1q15	ERQ Ques 15 Correct? 1 = YES Y1 (Angry)	385	0.483	0.500	0.000	1.000
ERQ1q16	ERQ Ques 16 Correct? 1 = YES Y1 (Sad)	385	0.813	0.390	0.000	1.000

ERQ Items Control Sample

Variable	Label	N	Mean	Std Dev	Minimum	Maximum
ERQ1q1	ERQ Ques 1 Correct? 1 = YES Y1 (Happy)	155	0.774	0.419	0.000	1.000
ERQ1q2	ERQ Ques 2 Correct? 1 = YES Y1 (Angry)	155	0.374	0.485	0.000	1.000
ERQ1q3	ERQ Ques 3 Correct? 1 = YES Y1 (Happy)	155	0.845	0.363	0.000	1.000
ERQ1q4	ERQ Ques 4 Correct? 1 = YES Y1 (Sad)	155	0.600	0.491	0.000	1.000
ERQ1q5	ERQ Ques 5 Correct? 1 = YES Y1 (Happy)	155	0.852	0.357	0.000	1.000
ERQ1q6	ERQ Ques 6 Correct? 1 = YES Y1 (Angry)	155	0.439	0.498	0.000	1.000
ERQ1q7	ERQ Ques 7 Correct? 1 = YES Y1 (Sad)	155	0.561	0.498	0.000	1.000
ERQ1q8	ERQ Ques 8 Correct? 1 = YES Y1 (Afraid)	155	0.594	0.493	0.000	1.000
ERQ1q9	ERQ Ques 9 Correct? 1 = YES Y1 (Afraid)	155	0.710	0.455	0.000	1.000
ERQ1q10	ERQ Ques 10 Correct? 1 = YES Y1 (Sad)	155	0.626	0.485	0.000	1.000
ERQ1q11	ERQ Ques 11 Correct? 1 = YES Y1 (Happy)	155	0.923	0.268	0.000	1.000
ERQ1q12	ERQ Ques 12 Correct? 1 = YES Y1 (Afraid)	155	0.787	0.411	0.000	1.000
ERQ1q13	ERQ Ques 13 Correct? 1 = YES Y1 (Afraid)	155	0.768	0.424	0.000	1.000
ERQ1q14	ERQ Ques 14 Correct? 1 = YES Y1 (Angry)	155	0.561	0.498	0.000	1.000
ERQ1q15	ERQ Ques 15 Correct? 1 = YES Y1 (Angry)	155	0.471	0.501	0.000	1.000
ERQ1q16	ERQ Ques 16 Correct? 1 = YES Y1 (Sad)	155	0.800	0.401	0.000	1.000

ERQ Items Intervention Sample

Variable	Label	N	Mean	Std Dev	Minimum	Maximum
ERQ1q1	ERQ Ques 1 Correct? 1 = YES Y1 (Happy)	154	0.766	0.425	0.000	1.000
ERQ1q2	ERQ Ques 2 Correct? 1 = YES Y1 (Angry)	154	0.357	0.481	0.000	1.000
ERQ1q3	ERQ Ques 3 Correct? 1 = YES Y1 (Happy)	154	0.792	0.407	0.000	1.000
ERQ1q4	ERQ Ques 4 Correct? 1 = YES Y1 (Sad)	154	0.701	0.459	0.000	1.000
ERQ1q5	ERQ Ques 5 Correct? 1 = YES Y1 (Happy)	154	0.838	0.370	0.000	1.000
ERQ1q6	ERQ Ques 6 Correct? 1 = YES Y1 (Angry)	154	0.390	0.489	0.000	1.000
ERQ1q7	ERQ Ques 7 Correct? 1 = YES Y1 (Sad)	154	0.571	0.496	0.000	1.000
ERQ1q8	ERQ Ques 8 Correct? 1 = YES Y1 (Afraid)	154	0.597	0.492	0.000	1.000
ERQ1q9	ERQ Ques 9 Correct? 1 = YES Y1 (Afraid)	154	0.792	0.407	0.000	1.000
ERQ1q10	ERQ Ques 10 Correct? 1 = YES Y1 (Sad)	154	0.643	0.481	0.000	1.000
ERQ1q11	ERQ Ques 11 Correct? 1 = YES Y1 (Happy)	154	0.948	0.223	0.000	1.000
ERQ1q12	ERQ Ques 12 Correct? 1 = YES Y1 (Afraid)	154	0.805	0.397	0.000	1.000
ERQ1q13	ERQ Ques 13 Correct? 1 = YES Y1 (Afraid)	154	0.838	0.370	0.000	1.000
ERQ1q14	ERQ Ques 14 Correct? 1 = YES Y1 (Angry)	154	0.617	0.488	0.000	1.000
ERQ1q15	ERQ Ques 15 Correct? 1 = YES Y1 (Angry)	154	0.435	0.497	0.000	1.000
ERQ1q16	ERQ Ques 16 Correct? 1 = YES Y1 (Sad)	154	0.773	0.420	0.000	1.000

ERQ Subscales Normative Sample

Variable	Label	N	Mean	Std Dev	Minimum	Maximum
ERQ1NAF	# Afraid correct ERQ Y1	383	3.018	1.179	0.000	4.000
ERQ1NAN	# Angry correct ERQ Y1	385	1.982	1.326	0.000	4.000
ERQ1NHP	# Happy correct ERQ Y1	385	3.506	0.830	0.000	4.000
ERQ1NSD	# Sad correct ERQ Y1	385	2.795	1.242	0.000	4.000
ERQ1TNC	Total # correct ERQ Y1	383	11.311	2.758	2.000	16.000

ERQ Subscales Control Sample

Variable	Label	N	Mean	Std Dev	Minimum	Maximum
ERQ1NAF	# Afraid correct ERQ Y1	155	2.858	1.224	0.000	4.000
ERQ1NAN	# Angry correct ERQ Y1	155	1.845	1.354	0.000	4.000
ERQ1NHP	# Happy correct ERQ Y1	155	3.394	0.894	0.000	4.000
ERQ1NSD	# Sad correct ERQ Y1	155	2.587	1.298	0.000	4.000
ERQ1TNC	Total # correct ERQ Y1	155	10.684	2.765	2.000	16.000

ERQ Subscales Intervention Sample

Variable	Label	N	Mean	Std Dev	Minimum	Maximum
ERQ1NAF	# Afraid correct ERQ Y1	152	3.072	1.110	0.000	4.000
ERQ1NAN	# Angry correct ERQ Y1	153	1.797	1.289	0.000	4.000
ERQ1NHP	# Happy correct ERQ Y1	150	3.360	0.971	0.000	4.000
ERQ1NSD	# Sad correct ERQ Y1	153	2.706	1.235	0.000	4.000
ERQ1TNC	Total # correct ERQ Y1	148	10.946	2.517	4.000	16.000

VII. Item and Scale Correlations

ERQ Items Report Sample

Pearson Correlation Coefficients, N = 615 Prob > r under H0: Rho=0									
	ERQ1q1	ERQ1q2	ERQ1q3	ERQ1q4	ERQ1q5	ERQ1q6	ERQ1q7	ERQ1q8	ERQ1q9
ERQ1q1 ERQ Ques 1 Correct? 1 = YES Y1 (Happy)	1.000	-0.106 0.009	0.092 0.022	0.289 0.000	0.364 0.000	0.018 0.657	0.142 0.000	0.045 0.266	0.112 0.005
ERQ1q2 ERQ Ques 2 Correct? 1 = YES Y1 (Angry)	-0.106 0.009	1.000	0.056 0.163	-0.059 0.141	0.000 0.991	0.283 0.000	-0.051 0.204	-0.009 0.821	-0.043 0.284
ERQ1q3 ERQ Ques 3 Correct? 1 = YES Y1 (Happy)	0.092 0.022	0.056 0.163	1.000	0.274 0.000	0.189 0.000	0.033 0.407	0.204 0.000	-0.029 0.477	0.125 0.002
ERQ1q4 ERQ Ques 4 Correct? 1 = YES Y1 (Sad)	0.289 0.000	-0.059 0.141	0.274 0.000	1.000	0.182 0.000	-0.093 0.020	0.314 0.000	-0.010 0.812	0.051 0.206
ERQ1q5 ERQ Ques 5 Correct? 1 = YES Y1 (Happy)	0.364 0.000	0.000 0.991	0.189 0.000	0.182 0.000	1.000	-0.008 0.842	0.191 0.000	0.026 0.522	0.108 0.008
ERQ1q6 ERQ Ques 6 Correct? 1 = YES Y1 (Angry)	0.018 0.657	0.283 0.000	0.033 0.407	-0.093 0.020	-0.008 0.842	1.000	-0.069 0.086	0.074 0.068	0.061 0.130
ERQ1q7 ERQ Ques 7 Correct? 1 = YES Y1 (Sad)	0.142 0.000	-0.051 0.204	0.204 0.000	0.314 0.000	0.191 0.000	-0.069 0.086	1.000	-0.012 0.758	0.076 0.060
ERQ1q8 ERQ Ques 8 Correct? 1 = YES Y1 (Afraid)	0.045 0.266	-0.009 0.821	-0.029 0.477	-0.010 0.812	0.026 0.522	0.074 0.068	-0.012 0.758	1.000	0.204 0.000
ERQ1q9 ERQ Ques 9 Correct? 1 = YES Y1 (Afraid)	0.112 0.005	-0.043 0.284	0.125 0.002	0.051 0.206	0.108 0.008	0.061 0.130	0.076 0.060	0.204 0.000	1.000
ERQ1q10 ERQ Ques 10 Correct? 1 = YES Y1 (Sad)	0.168 0.000	-0.081 0.043	0.152 0.000	0.287 0.000	0.246 0.000	-0.182 0.000	0.204 0.000	0.083 0.039	0.116 0.004
ERQ1q11 ERQ Ques 11 Correct? 1 = YES Y1 (Happy)	0.193 0.000	-0.040 0.316	0.202 0.000	0.163 0.000	0.331 0.000	-0.028 0.484	0.149 0.000	0.031 0.440	0.199 0.000
ERQ1q12 ERQ Ques 12 Correct? 1 = YES Y1 (Afraid)	0.122 0.002	-0.007 0.872	0.139 0.001	0.067 0.096	0.127 0.002	0.137 0.001	0.063 0.119	0.231 0.000	0.361 0.000
ERQ1q13 ERQ Ques 13 Correct? 1 = YES Y1 (Afraid)	0.146 0.000	-0.014 0.720	0.140 0.000	0.084 0.037	0.150 0.000	0.111 0.006	0.116 0.004	0.208 0.000	0.410 0.000
ERQ1q14 ERQ Ques 14 Correct? 1 = YES Y1 (Angry)	0.131 0.001	0.114 0.005	0.059 0.146	0.003 0.944	0.060 0.135	0.303 0.000	-0.038 0.346	0.030 0.462	0.187 0.000
ERQ1q15 ERQ Ques 15 Correct? 1 = YES Y1 (Angry)	0.041 0.313	0.252 0.000	0.022 0.582	-0.043 0.290	0.056 0.165	0.319 0.000	-0.099 0.014	-0.003 0.949	0.060 0.135
ERQ1q16 ERQ Ques 16 Correct? 1 = YES Y1 (Sad)	0.316 0.000	-0.111 0.006	0.186 0.000	0.311 0.000	0.214 0.000	-0.100 0.013	0.296 0.000	0.124 0.002	0.138 0.001

Pearson Correlation Coefficients, N = 615 Prob > r under H0: Rho=0							
	ERQ1q10	ERQ1q11	ERQ1q12	ERQ1q13	ERQ1q14	ERQ1q15	ERQ1q16
ERQ1q1 ERQ Ques 1 Correct? 1 = YES Y1 (Happy)	0.168 0.000	0.193 0.000	0.122 0.002	0.146 0.000	0.131 0.001	0.041 0.313	0.316 0.000
ERQ1q2 ERQ Ques 2 Correct? 1 = YES Y1 (Angry)	-0.081 0.043	-0.040 0.316	-0.007 0.872	-0.014 0.720	0.114 0.005	0.252 0.000	-0.111 0.006
ERQ1q3 ERQ Ques 3 Correct? 1 = YES Y1 (Happy)	0.152 0.000	0.202 0.000	0.139 0.001	0.140 0.000	0.059 0.146	0.022 0.582	0.186 0.000
ERQ1q4 ERQ Ques 4 Correct? 1 = YES Y1 (Sad)	0.287 0.000	0.163 0.000	0.067 0.096	0.084 0.037	0.003 0.944	-0.043 0.290	0.311 0.000

Pearson Correlation Coefficients, N = 615 Prob > r under H0: Rho=0							
	ERQ1q10	ERQ1q11	ERQ1q12	ERQ1q13	ERQ1q14	ERQ1q15	ERQ1q16
ERQ1q5 ERQ Ques 5 Correct? 1 = YES Y1 (Happy)	0.246 0.000	0.331 0.000	0.127 0.002	0.150 0.000	0.060 0.135	0.056 0.165	0.214 0.000
ERQ1q6 ERQ Ques 6 Correct? 1 = YES Y1 (Angry)	-0.182 0.000	-0.028 0.484	0.137 0.001	0.111 0.006	0.303 0.000	0.319 0.000	-0.100 0.013
ERQ1q7 ERQ Ques 7 Correct? 1 = YES Y1 (Sad)	0.204 0.000	0.149 0.000	0.063 0.119	0.116 0.004	-0.038 0.346	-0.099 0.014	0.296 0.000
ERQ1q8 ERQ Ques 8 Correct? 1 = YES Y1 (Afraid)	0.083 0.039	0.031 0.440	0.231 0.000	0.208 0.000	0.030 0.462	-0.003 0.949	0.124 0.002
ERQ1q9 ERQ Ques 9 Correct? 1 = YES Y1 (Afraid)	0.116 0.004	0.199 0.000	0.361 0.000	0.410 0.000	0.187 0.000	0.060 0.135	0.138 0.001
ERQ1q10 ERQ Ques 10 Correct? 1 = YES Y1 (Sad)	1.000	0.201 0.000	0.063 0.119	0.079 0.050	-0.040 0.324	-0.194 0.000	0.345 0.000
ERQ1q11 ERQ Ques 11 Correct? 1 = YES Y1 (Happy)	0.201 0.000	1.000	0.139 0.001	0.202 0.000	0.127 0.002	-0.025 0.535	0.244 0.000
ERQ1q12 ERQ Ques 12 Correct? 1 = YES Y1 (Afraid)	0.063 0.119	0.139 0.001	1.000	0.439 0.000	0.172 0.000	0.101 0.013	0.130 0.001
ERQ1q13 ERQ Ques 13 Correct? 1 = YES Y1 (Afraid)	0.079 0.050	0.202 0.000	0.439 0.000	1.000	0.200 0.000	0.074 0.067	0.122 0.002
ERQ1q14 ERQ Ques 14 Correct? 1 = YES Y1 (Angry)	-0.040 0.324	0.127 0.002	0.172 0.000	0.200 0.000	1.000	0.320 0.000	-0.006 0.872
ERQ1q15 ERQ Ques 15 Correct? 1 = YES Y1 (Angry)	-0.194 0.000	-0.025 0.535	0.101 0.013	0.074 0.067	0.320 0.000	1.000	-0.086 0.034
ERQ1q16 ERQ Ques 16 Correct? 1 = YES Y1 (Sad)	0.345 0.000	0.244 0.000	0.130 0.001	0.122 0.002	-0.006 0.872	-0.086 0.034	1.000

ERQ Subscales Report Sample

Pearson Correlation Coefficients Prob > r under H0: Rho=0 Number of Observations					
	ERQ1NAF	ERQ1NAN	ERQ1NHP	ERQ1NSD	ERQ1TNC
ERQ1NAF # Afraid correct ERQ Y1	1.000 0.000 611	0.144 0.000 611	0.229 0.000 608	0.158 0.000 610	0.639 0.000 607
ERQ1NAN # Angry correct ERQ Y1	0.144 0.000 611	1.000 0.000 614	0.060 0.140 611	-0.166 0.000 613	0.497 0.000 607
ERQ1NHP # Happy correct ERQ Y1	0.229 0.000 608	0.060 0.140 611	1.000 0.000 611	0.465 0.000 610	0.661 0.000 607
ERQ1NSD # Sad correct ERQ Y1	0.158 0.000 610	-0.166 0.000 613	0.465 0.000 610	1.000 0.000 614	0.599 0.000 607
ERQ1TNC Total # correct ERQ Y1	0.639 0.000 607	0.497 0.000 607	0.661 0.000 607	0.599 0.000 607	1.000 0.000 607

