

## **Emotion Recognition Questionnaire**

Grade 1/Year 2

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.fastrackproject.org>

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

### **Data Source**

Raw: C2C\_ER

Scored: ERQ2

### **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 second year of the study. Thirty-three records were missing the complete measure. Nine records were missing from the high-risk control sample (4 from Durham, 1 from Pennsylvania, and 4 from Washington) and 25 records were missing from

the normative sample (3 from Durham, 7 from Nashville, 3 from Pennsylvania, and 12 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 (ERQ12AF)	.70	.68
Number Angry Correct (ERQ12AN)	.52	.45
Number Happy Correct (ERQ2NHP)	.49	.29
Number Sad Correct (ERQ2NSD)	.43	.50
Total Number Correct (ERQ2TNC)	.62	.61

Three 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*, and the *Number Sad 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 two subscales, the *Number Sad Correct* and the *Total Number Correct*, with the normative sample scoring higher than the control sample for both scores.

Comparison of Means for Normative and Control for ERQ Y2								
Variable	Label	Normative		Control		DF	t Value	Pr >  t
		Mean	Std Dev	Mean	Std Dev			
ERQ2NAF	# Afraid correct ERQ Y2	3.40	1.01	3.29	1.09	428	-0.98	0.3293
ERQ2NAN	# Angry correct ERQ Y2	2.43	1.17	2.34	1.25	426	-0.79	0.4277
ERQ2NHP	# Happy correct ERQ Y2	3.82	0.45	3.77	0.59	427	-1.10	0.2717
ERQ2NSD	# Sad correct ERQ Y2	3.16	1.02	2.90	1.07	428	-2.40	0.0167
ERQ2TNC	Total # correct ERQ Y2	12.81	2.31	12.30	2.44	425	-2.11	0.0356

**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 84% of the normative sample and 84% of the high-risk control sample scoring a 4 on this scale, which was the highest possible score. The subscale *Number Afraid Correct* had 63% of the normative sample and 61% 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
ERQ2Q1	ERQ Ques 1 Correct? 1 = YES Y2 (Happy)	362	0.931	0.254	0.000	1.000
ERQ2Q2	ERQ Ques 2 Correct? 1 = YES Y2 (Angry)	362	0.478	0.500	0.000	1.000
ERQ2Q3	ERQ Ques 3 Correct? 1 = YES Y2 (Happy)	362	0.942	0.234	0.000	1.000
ERQ2Q4	ERQ Ques 4 Correct? 1 = YES Y2 (Sad)	362	0.729	0.445	0.000	1.000
ERQ2Q5	ERQ Ques 5 Correct? 1 = YES Y2 (Happy)	362	0.953	0.212	0.000	1.000
ERQ2Q6	ERQ Ques 6 Correct? 1 = YES Y2 (Angry)	362	0.597	0.491	0.000	1.000
ERQ2Q7	ERQ Ques 7 Correct? 1 = YES Y2 (Sad)	362	0.738	0.441	0.000	1.000
ERQ2Q8	ERQ Ques 8 Correct? 1 = YES Y2 (Afraid)	362	0.713	0.453	0.000	1.000
ERQ2Q9	ERQ Ques 9 Correct? 1 = YES Y2 (Afraid)	362	0.870	0.337	0.000	1.000
ERQ2Q10	ERQ Ques 10 Correct? 1 = YES Y2 (Sad)	362	0.743	0.438	0.000	1.000
ERQ2Q11	ERQ Ques 11 Correct? 1 = YES Y2 (Happy)	362	0.972	0.164	0.000	1.000
ERQ2Q12	ERQ Ques 12 Correct? 1 = YES Y2 (Afraid)	362	0.892	0.310	0.000	1.000
ERQ2Q13	ERQ Ques 13 Correct? 1 = YES Y2 (Afraid)	362	0.892	0.310	0.000	1.000
ERQ2Q14	ERQ Ques 14 Correct? 1 = YES Y2 (Angry)	362	0.785	0.412	0.000	1.000
ERQ2Q15	ERQ Ques 15 Correct? 1 = YES Y2 (Angry)	362	0.536	0.499	0.000	1.000
ERQ2Q16	ERQ Ques 16 Correct? 1 = YES Y2 (Sad)	362	0.884	0.321	0.000	1.000

ERQ Items Control Sample

Variable	Label	N	Mean	Std Dev	Minimum	Maximum
ERQ2Q1	ERQ Ques 1 Correct? 1 = YES Y2 (Happy)	146	0.938	0.241	0.000	1.000
ERQ2Q2	ERQ Ques 2 Correct? 1 = YES Y2 (Angry)	146	0.507	0.502	0.000	1.000
ERQ2Q3	ERQ Ques 3 Correct? 1 = YES Y2 (Happy)	146	0.932	0.253	0.000	1.000
ERQ2Q4	ERQ Ques 4 Correct? 1 = YES Y2 (Sad)	146	0.637	0.483	0.000	1.000
ERQ2Q5	ERQ Ques 5 Correct? 1 = YES Y2 (Happy)	146	0.925	0.265	0.000	1.000
ERQ2Q6	ERQ Ques 6 Correct? 1 = YES Y2 (Angry)	146	0.562	0.498	0.000	1.000
ERQ2Q7	ERQ Ques 7 Correct? 1 = YES Y2 (Sad)	146	0.719	0.451	0.000	1.000
ERQ2Q8	ERQ Ques 8 Correct? 1 = YES Y2 (Afraid)	146	0.712	0.454	0.000	1.000
ERQ2Q9	ERQ Ques 9 Correct? 1 = YES Y2 (Afraid)	146	0.842	0.366	0.000	1.000
ERQ2Q10	ERQ Ques 10 Correct? 1 = YES Y2 (Sad)	146	0.699	0.460	0.000	1.000
ERQ2Q11	ERQ Ques 11 Correct? 1 = YES Y2 (Happy)	146	0.973	0.164	0.000	1.000
ERQ2Q12	ERQ Ques 12 Correct? 1 = YES Y2 (Afraid)	146	0.856	0.352	0.000	1.000
ERQ2Q13	ERQ Ques 13 Correct? 1 = YES Y2 (Afraid)	146	0.884	0.322	0.000	1.000
ERQ2Q14	ERQ Ques 14 Correct? 1 = YES Y2 (Angry)	146	0.726	0.448	0.000	1.000
ERQ2Q15	ERQ Ques 15 Correct? 1 = YES Y2 (Angry)	146	0.541	0.500	0.000	1.000
ERQ2Q16	ERQ Ques 16 Correct? 1 = YES Y2 (Sad)	146	0.849	0.359	0.000	1.000

### ERQ Subscales Normative Sample

Variable	Label	N	Mean	Std Dev	Minimum	Maximum
ERQ2NAF	# Afraid correct ERQ Y2	362	3.367	1.018	0.000	4.000
ERQ2NAN	# Angry correct ERQ Y2	360	2.397	1.176	0.000	4.000
ERQ2NHP	# Happy correct ERQ Y2	361	3.801	0.493	1.000	4.000
ERQ2NSD	# Sad correct ERQ Y2	362	3.094	1.046	0.000	4.000
ERQ2TNC	Total # correct ERQ Y2	359	12.655	2.336	4.000	16.000

### ERQ Subscales Control Sample

Variable	Label	N	Mean	Std Dev	Minimum	Maximum
ERQ2NAF	# Afraid correct ERQ Y2	146	3.295	1.090	0.000	4.000
ERQ2NAN	# Angry correct ERQ Y2	146	2.336	1.250	0.000	4.000
ERQ2NHP	# Happy correct ERQ Y2	146	3.767	0.588	1.000	4.000
ERQ2NSD	# Sad correct ERQ Y2	146	2.904	1.072	0.000	4.000
ERQ2TNC	Total # correct ERQ Y2	146	12.301	2.439	5.000	16.000

VII. Subscale Correlations

ERQ Subscales Report Sample

Pearson Correlation Coefficients Prob >  r  under H0: Rho=0 Number of Observations					
	ERQ2NAF	ERQ2NAN	ERQ2NHP	ERQ2NSD	ERQ2TNC
<b>ERQ2NAF</b> # Afraid correct ERQ Y2	1.000 0.000 430	0.246 0.000 428	0.226 0.000 429	0.203 0.000 430	0.704 0.000 427
<b>ERQ2NAN</b> # Angry correct ERQ Y2	0.246 0.000 428	1.000 0.000 428	0.107 0.027 427	-0.003 0.957 428	0.637 0.000 427
<b>ERQ2NHP</b> # Happy correct ERQ Y2	0.226 0.000 429	0.107 0.027 427	1.000 0.000 429	0.281 0.000 429	0.491 0.000 427
<b>ERQ2NSD</b> # Sad correct ERQ Y2	0.203 0.000 430	-0.003 0.957 428	0.281 0.000 429	1.000 0.000 430	0.592 0.000 427
<b>ERQ2TNC</b> Total # correct ERQ Y2	0.704 0.000 427	0.637 0.000 427	0.491 0.000 427	0.592 0.000 427	1.000 0.000 427