Scale Development

In item writing, two authors (EPD and LMG), originally generated a list of 43 items that focused broadly on aspects of unpredictability in the social, emotional and physical environment during childhood. In terms of response scales, the decision was made to employ a dichotomous response (as opposed to a Likert-type scale) for a number of reasons including: 1. Some of the items (e.g. "My parents got divorced") were by nature dichotomous, and thus this choice allows us to keep the response metric consistent. 2. The ultimate goal for this instrument is application in a wide variety of clinical and research settings in diverse populations and there is evidence that Likert-type response scales are vulnerable to response-style biases (e.g. extreme response style) across different cultural and demographic groups (c.f. 1-3). 3. There is little evidence that increasing the number of response categories results in substantive increases in the reliability or validity of a scale (c.f. 4-6).

After the initial generation of items, the authors administered the item set repeatedly to a group of experts and non-experts of both genders with ages ranging from 12 to 75. During this iterative process, the items were discussed and revised extensively for clarity and ease of endorsement. Through the discussion with the group, an earlier age frame for some items was adopted (<12) because it became apparent that some activities happened very rarely at older ages and would lead to difficulty in determining answers. For example, respondents reported that they did not have bedtime routines in their teenage years.

The next step in scale development involved administering the QUIC to the three cohorts described in detail in the Methods (male and female adolescents, adult females and male Veterans). After data collection, the QUIC data were then analyzed both conceptually and empirically. Four of the study authors (EPD, LMG, MAH, HSS) independently generated a list of potential domains for subscales. After deliberation on these independent assessments, the group came to consensus on 5 subscales: Parental Involvement, Parental Predictability, Parental Environment, Physical Environment and Safety and Security. Each of the four members of the group then independently assigned each item to one of the subscales. The average agreement of subscale assignment for the items that were retained in the final scale was 97% across the four evaluators (i.e., the four evaluators agreed on which of the 5 subscales an item belonged for 34 of the 38 items). This exercise was further supported by examination of each item's correlation with related items and fit to subscales. Exploratory factor analyses were also utilized to support the development of the scale, but were not relied on because such analyses do not perform reliably for dichotomous measures. As result of this process 5 items were eliminated because they either did not fit well with any of the subscales conceptually or empirically (low correlation with the other items) or had a very low frequency of endorsement, yielding the final scale of 38 items.

Table S1. *Item-by-item endorsement rates*

	Adult Females (N = 116)	Male Veterans (N = 95)	Adolescents All (N = 175)	Adolescents Females (n = 91)	Adolescents Males (n = 84)
Summary of endorsement rates					
Minimum	3	10	3	4	1
25%ile	13	18	11	10	11
50%ile	16	26	16	17	16
75%ile	30	38	24	23	29
Maximum	48	54	49	50	49
Parental involvement and monitoring					
Prior to age 12: Had a set morning routine ®	9	17	10	10	11
Prior to age 12: Parents kept track of what I ate ®	29	38	21	21	21
Prior to age 12: Family ate a meal together most days ®	16	27	14	15	13
Prior to age 12: Parents made sure I got a good night's sleep ®	14	23	6	8	4
Prior to age 12: Had a bedtime routine ®	41	40	25	21	29
Prior to age 12: In afterschool hours a parent knew what I was doing ®	7	23	9	4	13
Prior to age 12: Parent regularly checked I did my homework ®	15	38	15	13	18
Prior to age 18: Parent regularly kept track of my school progress ®	14	33	3	6	1
Prior to age 18: Parent made time to see how I was doing ®	13	23	10	10	10

Parental predictability

Prior to age 12: Parents often late to pick me up	17	10	15	19	12
Prior to age 12: Usually knew when parents would be home ®	4	20	11	7	16
Prior to age 18: Parent had punishments that were unpredictable	41	37	37	35	39
Prior to age 18: Wondered if parent would come home at end of the day	9	17	20	20	20
Prior to age 18: Family planned activities to do together ®	20	31	13	14	11
Prior to age 18: One of parents would plan something and not follow through	26	30	38	41	36
Prior to age 18: Family had holiday traditions we did every year ®	14	15	7	8	7
Prior to age 18: Parent was disorganized	41	42	43	44	43
Prior to age 18: Parent was unpredictable	33	38	29	25	31
Prior to age 18: When parent was upset, did not know how they would act	30	42	33	33	32
Prior to age 18: Parent could go from calm to furious in instant	40	54	49	50	49
Prior to age 18: Parent could go from calm to stressed or nervous in instant	48	53	45	47	42

Parental environment

Prior to age 18: Long period of time when I didn't see parent	16	24	19	14	25
Prior to age 18: Experienced changes in custody arrangement	14	26	13	13	13
Prior to age 18: Parent changed jobs frequently	11	26	16	18	14
Prior to age 18: Times when parent was unemployed and couldn't find job	20	32	23	25	21
Prior to age 18: Parents had a stable relationship with each other ®	36	54	21	19	24
Prior to age 18: Parents got divorced	30	40	24	20	29
Prior to age 18: Parent had many romantic partners	16	23	17	17	17

Physical environment

Prior to age 18: Often people coming and going in house unexpectedly	3	13	13	11	14
Prior to age 18: Moved frequently	22	25	15	14	17
Prior to age 18: Changed schools frequently	12	15	9	8	11
Prior to age 18: Changed schools mid-year	21	28	10	12	7
Prior to age 18: Lived in a clean house ®	11	13	11	8	16
Prior to age 18: Lived in a cluttered house	16	16	17	19	16
Prior to age 18: In house things were often misplaced so could not find them	16	14	36	34	38

Safety and security

Prior to age 18: Period of time I worried would not have enough food	4	19	7	8	6
Prior to age 18: Period of time I worried family would not have enough money	23	45	17	22	11
Prior to age 18: Period of time I did not feel safe in my home	16	22	16	17	16

Note. ® indicates item is reverse scored.

Table S2. *Associations between QUIC and other indicators of early life adversity among adolescents (Cohort 3).*

	Unpredictability in Childhood (QUIC)
Parenting (APQ)	
Positive Parenting	-.31**
Inconsistent Discipline	.24**
Poor Monitoring/Supervision	.25**
Parental Involvement	-.39**
Corporal Punishment	.17
Household Chaos	.15†
Child Life Events	.37**

†$p < .10$, *$p < .05$, **$p < .01$

Table S3. *Multiple regression models with QUIC and childhood traumatic events predicting mental health outcomes in male Veterans and adult females*

Predictors	DV: Anhedonia Symptoms in Male Veterans		DV: Postpartum Depressive Symptoms in Adult Females	
	B (*SE*)	*β*	*B* (*SE*)	*β*
Childhood Traumatic Events/Maltreatment[a]	-1.99 (2.06)	-.13	-0.06 (0.39)	-.02
QUIC	**0.63* (0.24)**	**.34**	**0.23[†] (0.12)**	**.28**

Note. [a]Childhood maltreatment was assessed with the Childhood Trauma Questionnaire (CTQ) in male Veterans and childhood traumatic events with the Trauma History Questionnaire (THQ) in adult females. [†]$p = .06$, * $p < .05$, ** $p < .01$, *** $p < .001$.

References

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