Questions Documentation
Questionnaire 6
when the child was 36 months old

The Norwegian Mother, Father and Child Cohort Study (MoBa)

Mother Questionnaire

Version 1.0 March 2016 by Fufen Jin

Please note:
This document describes the instruments used in the questionnaire. It has not yet undergone final quality control and may contain minor inaccuracies. The document is subject to revision. If you have any comments or suggestions for improvement, please contact mor.barndata@fhi.no

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MODEL STRUCTURE OF WHAT IS PRESENTED PER INSTRUMENT / SECTION

Instrument

1. **Name of original instrument/question:**
   Original name of scale (*no name* if only single question)
   List wording of questions included in the section (with number from questionnaire in front) and write response categories (with values used in the dataset)

2. **Description of original scale or selection of items used**
   Description of analytical approaches for selecting just a sample of items from a scale
   If single question. NOT RELEVANT
   If selection of established short version, make referral to literature and/or use
   Where does the Q/scale come from, what is it meant to measure. Description of number of items, subscales. Where the Q/scale has been used and any information that give insight into what instrument this is.
   Primary references of the instrument as well as important secondary publications if relevant.

3. **Rationale for choosing the instrument:**
   What is it meant to measure and IF RELEVANT: Why this is a good measure.

4. **Modifications:**
   Describe modifications during the study from one version to another.
   Write if omitted or added from one version to another

NOTE 1:
Q6 has four versions (A, B, C and D). This instrument documentation is based on version C.

NOTE 2:
In the case of medication, there is an additional variable name with a "k" at the end, to indicate how the name of medicine has been coded.

Your child's development, health and history of illness

1. Height and Weight

1. **Name of original questions:** Questions about the child's height and weight at 3 different time points

Q	Response options / Variable name					
1	**What is your child's height and weight (without clothes) at 3 years? If you know your child's height and weight at 2 years and 15-18 months, enter these measurements too. (If you don't know them, go on to the next question.) Give the date when the measurements were taken and enter a cross to indicate whether they were taken by you.**					
			Date of measurement Day month year	Height	Weight	Own measurement
	Approx. 3 years		Q6_AGE_3_Y	GG25	GG26	GG664
	Approx. 2 years		Q6_AGE_2_Y	GG20	GG21	GG665
	Approx. 15-18 months		Q6_AGE_18_M	GG15	GG16	GG666

2. **Description of original questions: MoBa specific single questions**

Psychometric Information:
Mothers make a cross to indicate whether the measures were taken by themselves. Measures made by mothers might be less reliable than those taken by professionals.

Base References/Primary Citations:
Not relevant.

3. **Rationale for choosing the questions:**
By using measures of weight and length, Body Mass Index (BMI) can be estimated. BMI is a reliable indicator of body fatness for most children and teens (cf. Center for Disease Control and Prevention: **http://www.cdc.gov/healthyweight/assessing/bmi/childrens_bmi/about_childrens_bmi.html#How%20is%20BMI%20used%20with%20children%20and%20tGGns**).

4. **Revision during the data collection period:**
The box for writing length/height changed from three possible digits in version A to four possible digits (including one decimal) in version B and later versions. This change added the possibility of writing numbers above 100 cm.
The response column 'own measurement' were included only in versions C and D, but not in A or B.

2. First Step Unaided

1. **Name of original questions:** Questions about age in months when child took his/her first steps alone

Q		Response options	Variable name
2	**How many months old was your child when he/she took his/her first steps unaided?**		
	___ ____months		GG27
	Still not walking unaided		GG28

2. **Description of original questions: MoBa specific single questions**

Psychometric Information:
Not relevant.

Base References/Primary Citations:
Not relevant.

3. **Rationale for choosing the questions:**
Age of onset of walking unsupported is a milestone indicating gross motor skills.

4. **Revision during the data collection period:**
No revisions have been made in the question.

3-5. Long-term Illnesses or Health Problems

1. Name of original questions: Questions related to child's long-term illness or health problems

Q		Response options/Variable name			
3	**Has your child suffered any long-term illness or health problems since the age of 18 months?**				
		No	*Yes, has now*	*Yes, has previously*	*If so, has child been referred to a specialist?* 1-No 2-Yes
	1. Impaired hearing	GG29	GG30	GG31	GG32
	2. Impaired vision	GG33	GG34	GG35	GG36
	3. Delayed motor development (e.g. sits/walks late)	GG37	GG38	GG39	GG40
	4. Cerebral palsy	GG41	GG42	GG43	GG44
	5. Joint problems	GG45	GG46	GG47	GG48
	6. Diabetes	GG49	GG50	GG51	GG52
	7. Gained too little weight	GG53	GG54	GG55	GG56
	8. Gained too much weight	GG57	GG58	GG59	GG60
	9. Heart defect	GG61	GG62	GG63	GG64
	10. Testicles not descended into scrotum	GG65	GG66	GG67	GG68
	11. Asthma	GG69	GG70	GG71	GG72
	12. Allergy affecting eyes or nose, e.g. hay fever	GG73	GG74	GG75	GG76
	13. Atopic eczema (childhood eczema)	GG77	GG78	GG79	GG80
	14. Other type of eczema	GG81	GG82	GG83	GG84
	15. Frequent diarrhea	GG566	GG567	GG568	GG569
	16. Frequent stomach pains	GG570	GG571	GG572	GG573
	17. Food allergy/intolerance	GG85	GG86	GG87	GG88
	18. Other gastrointestinal problems	GG89/GG574	GG90/GG575	GG91/GG576	GG92/GG577
	19. Late or abnormal speech development	GG93	GG94	GG95	GG96
	20. Sleep problems	GG97	GG98	GG99	GG100
	21. Trouble relating to others	GG578	GG579	GG580	GG581
	22. Hyperactivity	GG105	GG106	GG107	GG108
	23. Autistic traits	GG101/GG582	GG102/GG583	GG103/GG584	GG104/GG585
	24. Other behavioral problems	GG109	GG110	GG111	GG112
	25. Other long-term illness/condition	GG113	GG114	GG115	GG116
	Other long-term illness/condition, specify_____	GG586 (txt.)			
4	**If your child has been to see a specialist or to the hospital, what did the investigation show?**				
		1) Everything was fine 2) Still some doubts/further investigation needed 3) Has not been for any investigation yet			GG117
		Diagnosis 1			GG118
		Diagnosis 1, describe:____			GG119(txt.)
		Diagnosis 2			GG120
		Diagnosis 2, describe:____			GG121(txt.)
		Diagnosis 3			GG122
		Diagnosis 3, describe:____			GG123(txt.)
5	**If your child has a serious or long-term illness, describe it, if possible, in more detail:**				
					GG124 (txt.)

2. Description of original questions: MoBa specific single questions

Psychometric Information:
Not relevant.

Base References/Primary Citations:
Not relevant.

3. Rationale for choosing the questions:

Questions were developed for the purpose of assessing the presence of long-term illnesses and health problems of the child at 3 years. These particular illnesses and health problems have been chosen to cover both common public health issues as well as rare illnesses. Information about referral to a specialist can be used as an indicator of severity of illness.

4. **Revision during the data collection period:**
Items 15 'frequent diarrhoea', 16 'frequent stomach pains', and 21 'trouble relating to others' were not included in version A, but were used in all the other versions.

6-8. Severe Life Events

1. Name of original questions: Questions about the child's exposure to or involvement in a serious incident

Q		Response options	Variable name
6	**Has your child ever been exposed to or involved in a serious accident?**		
		1-No 2-Yes	GG125
7	**If yes, give a description:**		
			GG126 (txt.)
8	**Do you think that this has affected your child's behaviour or development?**		
		1-No 2-Yes	GG127

2. Description of original questions: MoBa specific single questions

Psychometric Information:
Not relevant.

Base References/Primary Citations:
Not relevant.

3. Rationale for choosing the questions:
Some life events are major and involve dramatic levels of change and upheaval in a child's life. In the general population of children, potentially traumatic events do not necessarily result in posttraumatic stress (PTS) symptoms, except after multiple traumas or a history of anxiety. The prognosis after a single/ first lifetime trauma exposure is generally considered favorable (Copeland, et al., 2007). Apart from potentially resulting in PTS, traumatic events seem related to many forms of psychopathology, with the strongest links being with anxiety and depressive disorders.

4. Revision during the data collection period:
No revisions have been made in the questions.

Added reference
Copeland, W.E., Keeler, G., Angold, A., Costello, E.J. (2007). Traumatic Events and Posttraumatic Stress in Childhood. *Archives of General Psychiatry* 64 (5): 577-584.

9-11. Acute illnesses or Health Problems

1. Name of original questions: Questions about baby's acute illnesses or health problems

Q		Response options / Variable name		
9	**Has your child had any of the following illnesses/health problems between 6 and 11 months and/or 12 and 18 months? Specify how many times and whether your child has been admitted to hospital for this health problem.**			
		Illness/health problem?	*Number of times*	*Has your child been admitted to hospital?*
		1-No 2-Yes	Number 0-99	1-No 2-Yes
	1.Common cold	GG128	GG129	GG130
	2. Throat infection with a confirmed streptococci	GG131	GG132	GG133
	3. Other type of throat infection	GG134	GG135	GG136
	4. Ear infection	GG137	GG138	GG139
	5. Pseudo croup	GG140	GG141	GG142
	6. Bronchitis	GG143	GG144	GG145
	7. Pneumonia	GG146	GG147	GG148
	8. Gastric flu/diarrhea	GG149	GG150	GG151
	9. Urinary tract infection	GG152	GG153	GG154
	10. Encephalitis/meningitis	GG155	GG156	GG157
	11. Febrile convulsions	GG158	GG159	GG160
	12. Other convulsions (without any fever)	GG161	GG162	GG163
	13. Injury or accident	GG164	GG165	GG166
	14. Other	GG167	GG168	GG169
	Other, specify_____	GG587 (txt.)		
10	**If your child has been examined in or admitted to hospital, give the name of the hospital:**			
	Hospital name 1:			GG170(txt.)
	Hospital name 2:			GG171(txt.)
	Hospital name 3:			GG172(txt.)
11	**Has your child been referred to the following services since the age of 18 months?**			
	Habilitation service	1-No 2-Yes		GG173
	Educational psychology service			GG174
	Child psychiatric clinic/department			GG175

2. Description of original questions: MoBa specific single questions

Psychometric Information:
Not relevant.

Base References/Primary Citations:
Not relevant.

3. Rationale for choosing the questions:
Questions were developed for MoBa to survey the occurrence of illness or health problems of a more acute nature. Whether the child has been admitted to or examined at a hospital/referral to services is meant as an indicator of reliability of the mothers' response. The name of the hospital is relevant in cases where additional data are considered to be collected directly from the hospital.

4. Revision during the data collection period:
No revisions have been made in the questions.

12-13. Medication

1. Name of original questions: Questions about the child's use of medication in the last 12 months

Q		Response options / Variable name							
12	**Has your child taken any medication during the last 12 months?**								
		1-No 2-Yes						GG352	
13	**If yes, give the name of the medication and what age your child was when he took it.**								
		Name of medicine	*Duration of use(in version A)*					*Duration of use (versions B, C, D)*	*Still being taken now?*
			0-2 weeks	3-4 weeks	1-2 mth	3-6 mth	7-12 mth	1) 0-2 weeks 2) 3-4 weeks 3) 1-2 mth 4) 3-6 mth 5) 7-12 mth	1-No 2-Yes
	Medicine 1.	GG177 GG550_K	GG178	GG179	GG180	GG181	GG182	GG630	GG183
	Medicine 2.	GG184 GG551_K	GG185	GG186	GG187	GG188	GG189	GG631	GG190
	Medicine 3.	GG191 GG552_K	GG192	GG193	GG194	GG195	GG196	GG632	GG197
	Medicine 4.	GG198 GG553_K	GG199	GG200	GG201	GG202	GG203	GG633	GG204

2. Description of original questions: MoBa specific single questions

Psychometric Information:
Not relevant.

Base References/Primary Citations:
Not relevant.

3. Rationale for choosing the questions:
Questions were developed for MoBa specifically for the purpose of surveying what medication children have been taking the last 12 months. The use of medication is relevant both to consider effects and prevalence of use. It is also considered an important proxy for possible disease (e.g. insulin/diabetes, stimulants/ADHD).

4. Revision during the data collection period:
The duration specification is included in version A as separate variables, whereas in versions B, C, and D, they are alternatives of one single variable (see table above).

14-15. Vaccination

1. Name of original questions: Questions about vaccinations the child has had since last questionnaire

Q		Response options	Variable name			
14	**Has your child been given any vaccinations since you completed the previous questionnaire (at around 18 months or 6 months)?**					
		1-No 2-Yes	GG205			
15	**If yes, specify which vaccinations and when your child received them.**					
			Type of vaccination	Date given		
				Day	Month	Year
	Vaccination 1		GG206	Q6_VAC1_AGE		
	Vaccination 2		GG210	Q6_VAC2_AGE		
	Vaccination 3		GG588	Q6_VAC3_AGE		

2. **Description of original questions:** MoBa specific single questions

   Psychometric Information:
   Not relevant.

   Base References/Primary Citations:
   Not relevant.

3. **Rationale for choosing the questions:**
   These questions were developed for the purpose of surveying which vaccinations 3-year-old children have received.

4. **Revision during the data collection period:**
   No revisions have been made in the questions.

16. Dietary supplements

1. **Name of original questions:** Questions about the child's dietary supplements

Q		Response options	Variable name
16	**Is your child taking at the moment any cod liver oil, vitamins or other dietary supplements?**		
	1. Cod liver oil	1-Yes, daily 2-Sometimes 3-No	GG214
	2. Fluoride tablets		GG215
	3. Vitamin preparations		GG216
	Vitamin preparations, specify____		GG217 (txt.)
	4. Iron supplement		GG218
	Iron supplement, specify_____		GG219 (txt.)
	5. Other dietary supplements		GG220
	Other dietary supplements, specify____		GG221(txt.)

2. **Description of original questions:** MoBa specific single questions

   Psychometric Information:
   Not relevant.

   Base References/Primary Citations:
   Not relevant.

3. **Rationale for choosing the questions:**
   This question was developed for the purpose of surveying what dietary supplements are used among 3-year-old children.

4. **Revision during the data collection period:**
   No revisions have been made in the question.

Your child's development and ability to cope

17 & 21. Motor and Communication development-Ages and Stages Questionnaire (ASQ)

1. Name of original scale: Ages and Stages Questionnaires (ASQ)

Q		Response options	Variable name
17	**Can your child walk unaided?**		
	1. Without holding onto anything for support, does your child kick a ball by swinging his/her leg forward?	1-Yes 2-Sometimes 3-Not yet	GG222
	2. Can your child catch a large ball with both hands?		GG223
	3. When drawing, does your child hold a pencil, crayon, or pen between his/her fingers and thumb like an adult does?		GG224
	4. Can your child undo one or more buttons?		GG225
21	**Understanding what others say and being able to communicate**		
	1. Without showing him/her first, does your child point to the correct picture when you say, "Where is the cat" or "Where is the dog"? Your child must only point at the correct picture	1-Yes, often 2-Sometimes 3-Not yet	GG237
	2. When you ask your child to point to his/her eyes, nose, hair, feet, ears, and so forth, does he/she correctly point to at least seven body parts? (The child can point to parts of himself/herself, you, or a doll.)		GG238
	3. Does your child make sentences that are three or four words long?		GG239
	4. Without giving him/her help by pointing or using gestures, ask your child to "Put the shoe on the table" and "Put the book under the chair". Does your child carry out both of these directions correctly?		GG240
	5. When looking at a picture book, does your child tell you what is happening or what action is taking place in the picture? (For example, "Barking", "Running", "Eating" and "Crying"?) You may ask, "What is the dog (or boy) doing?"		GG241
	6. Can your child tell you at least two things about an object he/she is familiar with? If you say, for example, "Tell me about your ball", will your child answer by saying something like "It is round, I can throw it, it is big"?		GG242

2. Description of original instrument: Ages and Stages Questionnaires (ASQ)

The ASQ (Squires, et al., 1999) is a series of 19 parent-completed screening questionnaires for child development, specific to the ages of 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 27, 30, 33, 36, 42, 48, 54, and 60 months. Each questionnaire consists of five 6-item scales: Communication, Gross Motor, Fine Motor, Problem Solving, and Personal-Social. Parents answer "yes", "sometimes", or "not yet", according to whether the child can do the activity. The questionnaires were back translated into Norwegian (versions in both standard forms — Bokmål and Nynorsk — were produced). Janson and Smith (2003) presented descriptive results of the study along with details of the translation and adaptation.

Psychometric Information:

Cronbach's alphas on the communication area ranged from .63 to .74 at different ages. On the gross motor area, Cronbach's alphas ranged from .53 to .87 across ages, whereas on the fine motor area the alpha ranged from .49 to .86. Test-retest reliability, measured as percentage agreement between classifications based on the questionnaires completed twice by 175 parents at 2-weeks intervals, was 94%. Inter-observer reliability, measured as percentage agreement between classifications based on the questionnaires completed by 112 parents and those completed by two examiners, was 94%. As for the general validity of the ASQ, the questionnaires as reported in percent agreement between questionnaires and standardized assessments reached an 84% overall agreement. Specificity remained high (86%) across questionnaire intervals and standardized assessments. Sensitivity was lower, averaging 72%. The construct validity of the ASQ was also supported in a Norwegian Study (Richter & Janson, 2007)

Base References/Primary Citations:

Janson, H. & Smith, L. (2003). *Norsk manualsupplement til Ages and Stages Questionnaires* [Norwegian manual supplement for the Ages and Stages Questionnaires]. Oslo, Norway: Regionsenter for barne- og ungdomspsykiatri, Helseregion Øst/Sør.

Squires, J., Potter, L., & Bricker, D. (1999). *The ASQ User's Guide* (2nd ed.). Baltimore: Paul H. Brookes Publishing Co.

Richter & Janson (2007). A validation study of the Norwegian version of the Ages and Stages Questionnaire. *Acta Pædiatrica* 96: 748-752.

Modifications
Section 17:
The original Motor section in ASQ consists of two parts, one for gross and one for fine motor skills. In MoBa two items from each part are chosen. To get a greater variation in answers, one item is chosen from motor skills at 36 months and one item from 48 months in each domain. That means: item 1 is identical with the first item of the gross motor skills section of ASQ-36;
item 2 is identical with the first item of the gross motor skills section of ASQ-48;
item 3 is identical with the last item of the fine motor skills section of ASQ-36;
item 4 is identical with the fourth item of the fine motor skills section of ASQ-48.
Section 21:
The original communication section of ASQ at 36 months consists of six items. The last two items are not included in the MoBa questionnaire (because one involves actual testing of the child by the mother, and the other due to space limitations). To capture a greater variation in the answers, one item (item 1) is chosen from communication skills at 18 months and one item (item 6) from 48 months, and included along with four items from the communication domain of the 36-month questionnaire.

3. **Rationale for choosing the questions:**
The ASQ has been found to be an effective diagnostic tool of developmental delay and/or disturbances (Richter & Janson, 2007).

4. **Revision during the data collection period:**
No revisions have been made.

18. Intelligibility/Complexity of 3-year-old Children's Utterances

1. **Name of original scale:** The name of the original scale is not known, but the scale has been used by Dale, et al., (2003) in the Twins Early Development Study (TEDS).

Q	*Complexity of the child's utterances at 3yr*	Response options	Variable name
18	**About your child's language skills.** *(Enter a cross for the option that best describes the way your child talks.)*		
		1- Not yet talking 2- He/she is talking, but you can't understand him/her 3- Talking in one-word utterances, such as "milk" or "down" 4- Talking in 2- to 3-word phrases, such as "me got ball" or "give doll" 5- Talking in fairly complete sentences, such as "I got a doll" or "can I go outside?" 6- Talking in long and complicated sentences, such as "when I went to the park, I went on the swings" or "I saw a man standing on the corner"	GG226

2. **Description of original instrument**:
   Parents are asked which of the six response categories best describes how their child talks. The list of options is often perceived as a 6-point ordinal grammar rating with the sixth indicating the most complex use of language. It should be noted that response categories 1 and 2 are not about grammar but signify that children's speech are not ratable for grammar; response categories 3-6 indicate length of utterance/grammar complexity.

   Psychometric Information:
   Sample – Data from 5208 families with twins born in England and Wales in 1994-1995.
   Validity and reliability – for the twins selected for low parent-report language, the mean of the tester-administered composite was -1.23, approximately the 11th percentile. In addition to regression to the mean, some of the discrepancy reflects the fact that the tester-administered battery included a wider range of language measures, including articulation, phonological awareness and narrative skills (Dale, et al., 2003).

   Base References/Primary Citations:
   Dale, P. S., Price, T. S., Bishop, D. V. M., & Plomin, R. (2003). Outcomes of Early Language Delay: I. Predicting Persistent and Transient Language Difficulties at 3 and 4 Years. *Journal of Speech, Language, and Hearing Research 46:* 544-560.

3. **Rationale for choosing the questions:**
   This scale (response categories 3-6) can be used to indicate the grammatical complexity level of 3-year-old children. Delayed acquisition of milestones can be the first indication of language impairment.

4. **Revision during the data collection period:**
   No revisions have been made in the question.

19. Non-verbal Communication

1. Name of original scale: Non-Verbal Communication Checklist (NVCC)

Q		Response options	Variable name
19	**More about your child's development.**		
	1. When you enthusiastically say: "Where is the ball (or other toy)?", will your child point towards the toy, even if it is more than 1 metre away?	1-Yes, usually 2-Rarely 3- Not yet	GG227
	2. When you look at a distant object and surprised and excited, say: "WOW...what's that?", does he/she turn his/her head in the same direction as you?		GG228
	3. Does your child use sounds or words together with gestures (for example, uses sounds when pointing or reaching towards toys or objects)?		GG229
	4. Does your child show you toys by looking at you and holding the toy up towards you (from a distance just so you can look at it)?		GG230

2. **Description of original instrument**: **Non-Verbal Communication Checklist (NVCC)**

The Non-Verbal Communication Checklist (Schjolberg, 2003; 2009 submitted) a parental-report Autism screening tool developed for use with children younger than 30 months of age, focusing on the development of non-verbal skills used in play and interaction. The original questionnaire includes 12 questions. The first five focus on whether the child initiates activities without the mother doing something first. The next five questions focus on how the child responds to things the mother does. The questions are answered "yes, usually", "rarely" or "not yet". The last two questions ask the mother to rate the child's communicative development and general development. These questions are answered with "earlier than", "similar to", or "later than" peers. A selection of four questions from the original scale was chosen for use in the MoBa. Two of the questions focus on child responding (items 1 & 2) and the other two (items 3 & 4) focus on child initiating.

Psychometric Information:

The NVCC has been used for screening in a Well baby clinic sample of 1 243 children ranging from 8.2 to 36.8 months old (mean age was 22.6 months; sd=7.1) in addition to a referred sample of 41 children. Test retest reliability was assessed for 110 parents filling out the checklist twice within 3 weeks: Pearsons r was .87 for the NVCC total score. Inter-rater agreement rate was 88%. Kappa for screen positive was .81. Cronbach's alpha for the entire checklist was .79. The inter-item correlations ranged from .12 to.50 (Schjolberg, 2009 submitted). Cronbach's alpha for the 4 items is .70 in MoBa Q6.

Base References/Primary Citations:

Schjolberg, S. (2003). Early Identification of Autism Spectrum Disorders. Presented at conference in Gøteborg: The Social Brain.

Schjolberg, S. (2009 submitted). A population based study of early detection of autism spectrum disorders.

3. **Rationale for choosing the questions:**

This instrument is chosen to cover an area of communication that is not dependent on language skills and taps into aspects of joint attention not already covered through the use of M-CHAT and ESAT.

4. **Revision during the data collection period:**

No revisions have been made in the question.

20. Prosocial behaviour

1. **Name of original scale:** Strength and Difficulties Questionnaire (SDQ)-Prosocial behaviour scale: Goodman, R. (1997). The Strengths and Difficulties Questionnaire: A Research Note. Journal of Child Psychology and Psychiatry 38: 581-586.

Q		Response options	Variable name
20	**Item focus**		
	Shares	1-Not True 2-Somewhat True 3-Certainly True	GG231
	Helpful		GG232
	Considerate		GG233
	Kind		GG234
	Volunteers		GG235

2. **Description of scale: Strength and Difficulties Questionnaire (SDQ)-Prosocial Subscale**

The SDQ is a brief behavioural screening questionnaire about 3-16 year olds. The SDQ includes a 5-item scale measuring prosocial behaviour. This entire scale was administered in paper version. The items are scored on a Likert scale of 1 = not true, 2 = somewhat true, and 3 = certainly true. To obtain the conventional SDQ prosocial total (which uses a 0-2 scale and has a possible range of 0 – 10), first re-code each response from 1-3 to 0-2 (subtract 1). The prosocal total score is then calculated as the sum of the five recoded items.

Base References/Primary Citations:

Goodman, R. (1997). The Strengths and Difficulties Questionnaire: A Research Note. Journal of Child Psychology and Psychiatry 38: 581-586.

Goodman, R. (2001). Psychometric properties of the strengths and difficulties questionnaire. Journal of the American Academy of Child and Adolescent Psychiatry 40: 1337-1345.

4. **Revision during the data collection period:**

No revisions from version A to the other versions in all questionnaires.

Added reference:

Heyerdahl, S. (2003). SDQ – Strength and Difficulties Questionnaire: En orientering om et nytt spørreskjema for kartlegging av mental helse hos barn og unge, brukt i UNGHUBRO, OPPHED og TROFINN. *Norsk Epidemiologi* 13 (1): 127-135.

NB! Both ESAT and M-CHAT are screening instruments for autistic traits, and need to be looked at together. Due to redundancy of items between the two scales and limited space in the questionnaires, for the most similar items only one scale was selected.

22. Autistic Traits Part I: Modified Checklist for Autism in Toddlers (M-CHAT)

1. Name of original scale: Modified Checklist for Autism in Toddlers (M-CHAT)

Q		Response options	Variable name
22	**About body language and other ways of communicating with others.** *We are asking you about how your child usually is. If something happens seldom (for instance, if you have only seen it once or twice), enter a cross under "No".*		
	1. Does your child respond to his/her name one of the first two times you call?	1- Yes 2- No	GG243
	2. Does your child ever bring objects over to you to show you something?		GG244
	3. Does your child imitate you (e.g., you make a face - will your child imitate it?)?		GG245
	4. Does your child ever use his/her index finger to point, to indicate interest in something?		GG246
	5. Does your child take an interest in other children?		GG247
	6. If you point at a toy across the room, does your child look at it?		GG248
	9. Does your child ever seem oversensitive to noise (e.g. plugging ears)?		GG251

2. Description of original instrument: **Modified Checklist for Autism in Toddlers (M-CHAT)**

The M-CHAT (Robins et al., 2001) is a 23 item (yes/no) parent report checklist designed to identify signs of ASD in children aged 16-30 months. It includes items that ask about language, sensory responsiveness or arousal modulation, theory of mind, motor functions or social/emotional functions or the precursors to these functions. A subset of six items pertaining to social relatedness and communication (namely, items 1-6 in this section) was found to have the best discriminability between children diagnosed with and without autism. The M-CHAT is an extension of the Checklist for Autism in Toddlers (CHAT; Baron-Cohen, Allen & Gillberg, 1992).

Psychometric Information:

Cronbach's alphas for the entire checklist and for the subset of 6 items was .85 and .83, respectively. Discriminant function analysis found high classification accuracy, but positive predictive power (PPP) was estimated at .36. A follow-up interview resulted in a decreased false positive rate and yielded an estimate of .68 for PPP (Robins et al., 2001). The sensitivity of the M-CHAT was .92 for the total score, but specificity was low at .27 (Eaves, et al., 2006).

Base References/Primary Citations:

Baron-Cohen S, Allen J, Gillberg C. 1992. Can autism be detected at 18 months? The needle, the haystack, and the CHAT. *The British Journal of Psychiatry* 161(6):839-843.

Eaves L, Wingert H, Ho H H. 2006. Screening for autism, Agreement with diagnosis. *Autism* 10(3): 229-242.

Robins D L, Fein D, Barton M L, and Green J A. 2001. The Modified Checklist for Autism in Toddlers: An Initial Study Investigating the Early Detection of Autism and Pervasive Developmental Disorders. *Journal of Autism and Developmental Disorders,* 31(2):131-144.

Modifications:

The subset of 6 items (items 1-6) found to be the best discriminators of children diagnosed with ASD plus one item (i.e. "Does your child ever seem oversensitive to noise?") were selected.

3. Rationale for choosing the questions:

The M-CHAT was chosen in the MoBa due to the possibility to look at screening properties for autism as well as to form a basis to study developmental trajectories of non-verbal communication and autistic traits.

4. **Revision during the data collection period:**
   No revisions have been made.

22. Autistic Traits Part II: Early Screening of Autistic Traits Questionnaire (ESAT)

1. Name of original scale: Early Screening of Autistic Traits Questionnaire (ESAT)

Q		Response options	Variable name
22	**About body language and other ways of communicating with others.** *We are asking you about how your child usually is. If something happens seldom (for instance, if you have only seen it once or twice), enter a cross under "No".*		
	7. Is it easy to make eye-contact with your child?	1- Yes 2- No	GG249
	8. Does your child react when spoken to, for instance, by looking, listening, smiling, speaking or babbling?		GG250

2. Description of original instrument: **Early Screening of Autistic Traits Questionnaire (ESAT)**

The ESAT (Swinkels, et al., 2006) is a level one screener originally designed for use with 14-15 month old children. The ESAT consists of fourteen parent report items measuring early social-communication skills, play, and restricted and repetitive behaviours, answered with yes or no. Children who failed three or more items are considered to be at risk for Autism Spectrum Disorder (ASD).

Psychometric Information:

Dietz et al. (2006) screened 31,724 Dutch children in a two-part process. Initially children were screened at well baby visits using a four-item questionnaire administered by physicians. A psychologist using the 14-item ESAT then evaluated children who screened positive in their homes. Children who failed three or more items were invited for a comprehensive psychiatric evaluation. Eighteen children with ASD were detected and an additional 55 children were identified as having developmental concerns. This yields a positive predictive power of .25, although none of the children identified by the ESAT were typically developing. Children who received an ASD diagnosis were re-evaluated at age 42 months, and stability of diagnosis was observed in 14 of 16 children.

Base References/Primary Citations:

Dietz C, Swinkels S, van Daalen E, van Engeland H, Buitelaar, KJ. 2006. Screening for autistic spectrum disorder in children aged 14-15 months. II: Population screening with the Early Screening of Autistic Traits Questionnaire (ESAT), Design and general findings. *Journal of Autism and Developmental Disorders* 36: 713-722, 2006.

Swinkels S, Dietz C, van Daalen E, van Engeland H, Buitelaar, KJ. 2006. Screening for Autistic Spectrum in Children Aged 14 to 15 months. I: The Development of the Early Screening for Autistic Traits Questionnaire (ESAT). *Journal of autism and Developmental Disorders* 36; 723-732.

Modifications:

Only selected items from the ESAT were used. Due to high redundancy between items on the ESAT and M-CHAT (see the above section) and constraints in the questionnaire for use of space, for the most similar items only one instrument was selected.

3. Rationale for choosing the questions:

Due to the Autism Birth Cohort (ABC) study, a sub-study of the MoBa, including items from different screening instruments as well as covering different aspects of "autistic traits" has been of importance for studying symptom trajectories from 6 months and upwards.

4. Revision during the data collection period:

No revisions have been made.

22. Autistic Traits Part III: Additional questions on Autism Spectrum Disorders (MoBa)

1. Name of original questions: MoBa specific questions on Autism Spectrum disorders

Q		Response options	Variable name
22	**About body language and other ways of communicating with others.** *We are asking you about how your child usually is. If something happens seldom (for instance, if you have only seen it once or twice), enter a cross under "No".*		
(In version B, C & D)	10a. Does your child only choose a very small number of particular toys or objects, even if you try to make him/her interested in more things?	1- Yes 2- No	GG592
(in version A)	10b. When your child has been alone for a while, does he/she try to catch your attention by e.g. calling your name?		GG252
All versions	11. Does your child wave to people to greet or say goodbye to them?		GG253
All versions	12. Can your child hurt himself/herself a lot without seeming to be bothered (has a high pain threshold)?		GG254

2. Description of original instrument: MoBa specific questions on Autism Spectrum disorders

Psychometric Information:
Not relevant.

Base References/Primary Citations:
Not relevant.

3. Rationale for choosing the questions:
These additional questions were developed for MoBa to cover areas of developmental problems that are not covered elsewhere in the questionnaire.

4. Revision during the data collection period:
Item 10b in version A was replaced with item 10a in versions B, C & D (see table above). No further revisions have been made.

23-25. Social Communication Questionnaire (SCQ)

1. Name of original scale: Social Communication Questionnaire (SCQ)

Q		Response options	Variable name
23	**Your child's use of language with others** *(Mark one box per question, whether you think it applies for your child or not)*		
	1. Is he/she now able to talk using short phrases or sentences?	1- Yes 2- No	GG255
	2. Do you have a to and fro "conversation" with her/him that involves taking turns or building on what you have said?		GG257
	3. Does she/he ever use odd phrases or say the same thing over and over in almost exactly the same way (either phrases that she/he hears other people use or ones that she/he makes up)?		GG258
	4. Does your child ever use socially inappropriate questions or statements? For example, does your child ever regularly ask personal questions or make personal comments at awkward times?		GG259
	5. Does your child ever get his/her pronouns mixed up (e.g., saying *you* or *he/she* for *I*)?		GG260
	6. Does your child ever use words that he/she seems to have invented or made up her/himself; put things in odd, indirect ways; or use metaphorical ways of saying things (e.g., saying *hot rain* for *steam*)?		GG261
	7. Does your child ever say the same thing over and over in exactly the same way or insist that you say the same thing over and over again?		GG262
24	**About behaviour and specific things that children can think of doing** *(Mark one box per question, whether you think it applies for your child or not)*	**Response options**	**Variable name**
	8. Does your child ever have things that he/she seems to have to do in a very particular way or order or rituals that the child insists that you go through?	1- Yes 2- No	GG263
	9. Does your child's facial expression usually seem appropriate to the particular situation, as far as you can tell?		GG264
	10. Does your child ever use your hand like a tool or as if it were part of his/her own body (e.g., pointing with your finger or putting your hand on a doorknob to get you to open the door)?		GG265
	11. Does your child ever have any interests that preoccupy him/her and might seem odd to other people (e.g., traffic lights, drainpipes, or timetables)?		GG266
	12. Does your child ever seem to be more interested in parts of a toy or an object (e.g., spinning the wheels of a car), rather than in using the object as it was intended?		GG267
	13. Does your child ever have any special interests that are unusual in their intensity, but otherwise appropriate for his/her age and peer group (e.g., trains or dinosaurs)?		GG268
	14. Does your child ever seem to be *unusually* interested in the sight, feel, sound, taste, or smell of things or people?		GG269
	15. Does your child ever have any mannerisms or odd ways of moving his/her hands or fingers, such as flapping or moving his/her fingers in front of his/her eyes?		GG270
	16. Does your child ever have any complicated movements of his/her whole body, such as spinning or repeatedly bouncing up and down?		GG271
	17. Does your child ever injure himself/herself deliberately, such as by biting his/her arm or banging his/her head?		GG272
	18. Does your child ever have any objects (other than a soft toy or comfort blanket) that he/she has to carry around?		GG273
25	**About social development and interest in others** *(Mark one box per question, whether you think it applies for your child or not)*	**Response options**	Variable name
	19. Does your child have any particular friends or a best friend?	1- Yes 2- No	GG274
	20. Does your child ever talk with you just to be friendly (rather than to get something)?		GG256
	21. Does your child ever spontaneously copy you (or other people) or what you are doing (such as vacuuming, gardening, or mending things)?		GG275
	22. Does your child ever spontaneously point at things around him/her just to show you things (not because he/she wants them)?		GG276
	23. Does your child ever use gestures, other than pointing or pulling your hand, to let you know what he/she wants?		GG277
	24. Does your child nod his/her head to indicate *yes*?		GG278
	25. Does your child shake his/her head to indicate *no*?		GG279
	26. Does your child usually look at you directly in the face when doing things with you or talking with you?		GG280
	27. Does your child smile back if someone smiles at him/her?		GG281
	28. Does your child ever show you things that interest him/her to engage your attention?		GG282
	29. Does your child ever offer to share things other than food with you?		GG283
	30. Does your child ever seem to want you to join in his/her enjoyment of something?		GG284
	31. Does your child ever try to comfort you when you are sad or hurt?		GG285
	32. If your child wants something or wants help, does he/she look at you and use gestures with sounds or words to get your attention?		GG286
	33. Does your child show a normal range of facial expressions?		GG287

	34. Does your child ever spontaneously join in and try to copy the actions in social games, such as *The Mulberry Bush* or *London Bridge Is Falling Down*?		GG288
	35. Does your child play any pretend or make-believe games?		GG289
	36. Does your child seem interested in other children of approximately the same age whom he/she does not know?		GG290
	37. Does your child respond positively when another child approaches him/her?		GG291
	38. If you come into a room and start talking to your child without calling his/her name, does he/she usually look up and pay attention to you?		GG292
	39. Does your child ever play imaginative games with another child in such a way that you can tell that each child understands what the other is pretending?		GG293
	40. Does your child play cooperatively in games that need some form of joining in with a group of other children, such as hide-and-seek or ball games?		GG294

2. **Description of original instrument**: **Social Communication Questionnaire (SCQ)**
The SCQ (Ritter, et al., 2003) is a parental-report Autism screening tool developed to serve as a practical piece of early childhood developmental screenings which parallels the Autism Diagnostic Interview-Revised (ADI-R; Lord, et al., 1994). It is a 40-question screening form designed for children with an age of 4.0 years (and a mental age of 2.0) which takes less than 10 minutes to complete and score. The items are administered in a yes/no response format.

Psychometric Information:
Internal consistency measurements on a total number of 214 cases range from .81 to .93. The agreement between the SCQ and the ADI-R at both Total Score and Domain Score level is high, with the agreements being substantially unaffected by age, gender, language level, and performance IQ. Agreement is, however, only moderate at the individual item level (Rutter, et al., 2003). Eaves, et al. (2006) described the use of the SCQ in 151 children aged 36-82 months and reported sensitivity and specificity estimates of .71 and .79 respectively, with lower estimates for children with high verbal IQs.

Base References/Primary Citations:
Eaves L, Wingert H, Ho H. (2006). Screening for autism spectrum disorders with the social communication questionnaire. *Journal of Developmental Behavioral Pediatrics* 27:95-103.

Lord C, Rutter M. & Le Couteur A. (1994). Autism Diagnostic Interview-Revised: a revised version of a diagnostic interview for caregivers of individuals with possible pervasive developmental disorders. *The Journal of Autism and Developmental Disorders* 24 (5): 659–685.

Rutter, M., Bailey, A., & Lord, C. (2003). *SCQ The Social Communication Questionnaire: Manual*. Los Angeles: Western Psychological Services.

3. **Rationale for choosing the questions:**
The SCQ provides a dimensional measure of ASD symptomatology, with a cutoff score that can be used to indicate the likelihood of an individual having ASD. The instrument can be used as a screening device, or to indicate approximate level of severity of ASD symptomatology, across groups or with respect to changes over time.

4. **Revision during the data collection period:**
Some minor revisions have been made in question order from version A to the other versions.

26. Loss of Skills

1. Name of original questions: questions about the child's loss of skills

Q		Response options	Variable name
26	**Loss of skills.** *(Is there something your child used to be able to do, but has lost the ability to do?)*		
	1. Has your child lost any language skills (for example, used single words or sentences for a time and then stopped using the words)?	1- No 2- Yes 3- Not sure	GG295
	2. Has your child lost any social skills (for example, could wave or say "Hi" to greet someone, then lost this skill)?		GG296
	3. Has your child turned out to be less sociable (for example, he/she is more difficult to have eye contact with, is less interested in other persons now)?		GG297
	4. Has your child lost any motor skills (for example, could run and jump while remaining steady, but falls over much more now)?		GG298

2. Description of original instrument: MoBa specific questions

Psychometric Information:
Not relevant.

Base References/Primary Citations:
Not relevant.

3. Rationale for choosing the questions:
According to Filipek et al (1999), any concern that implies "regression" or loss of skills in language or social skills should be a serious red flag. The loss of skills is a strong indicator of ASD, Childhood Disintegrative Disorder (CDD), and Rett syndrome.

4. Revision during the data collection period:
No revisions have been made.

Added reference:
Filipek PA, Accardo PJ, Baranek GT, Cook EH Jr, Dawson G, Gordon B, Gravel JS, Johnson CP, Kallen RJ, Levy SE, Minshew NJ, Ozonoff S, Prizant BM, Rapin I, Rogers SJ, Stone WL, Teplin S, Tuchman RF, Volkmar FR. (1999). The Screening and Diagnosis of Autistic Spectrum Disorders. *Journal of Autism and Developmental Disorders* 29(6): 439-484.

27. Temperament

1. Name of original scale: The Emotionality, Activity and Shyness Temperament Questionnaire (EAS)

Q		Response options	Variable name
27	**To what extent do the following statements apply to your child's behaviour during the last two month?**		
	1. Your child cries easily	1-Very typical 2- Quite typical 3- Neither/nor 4-Not so typical 5-Not at all typical	GG299
	2. Your child is always on the go		GG300
	3. Your child prefers playing with others rather than alone		GG301
	4. Your child is off and running as soon as he/she wakes up in the morning		GG302
	5. Your child is very sociable		GG303
	6. Your child takes a long time to warm up to strangers		GG304
	7. Your child gets upset or sad easily		GG305
	8. Your child prefers quiet, inactive games to more active ones		GG306
	9. Your child likes to be with people		GG307
	10. Your child reacts intensely when upset		GG308
	11. Your child is very friendly with strangers		GG309
	12. Your child find other people more fun than anything else		GG310
	13. Your child complains that certain garments are too tight		GG311
	14. Your child is distressed by having his/her face or hair washed		GG312

2. Description of original instrument: **The Emotionality, Activity and Shyness Temperament Questionnaire (EAS)**

The EAS temperament questionnaire measures the four temperament dimensions; Shyness (fear), Emotionality (irritability/anger), Sociability (Positive affect/including approach), and Activity (activity level). These are measured by subscales with five questions each. Mothers are asked to rate whether the 20 different statements apply to their child. There are five response categories from "very typical" to "not at all typical". Three questions from each temperament dimension are selected for use in the MoBa. The 12 selective items constitute the short form of the EAS.

Psychometric Information:

The Cronbach's alpha reliability estimates for the original instrument were estimated to be .71-.79 (in the 18-month, 30-month and 50-month material) for shyness, .61-.67 for emotionality, .48-.60 for sociability, and .68-.75 for activity (Mathiesen & Tambs, 1999). Estimates for the short-form scales were .70-.72 for shyness, .58-.61 for emotionality, .43-.45 for sociability, and .59-.62 for activity. Test-retest correlations for 18-30 months varied from .44 to .60 for original scores and from .40 to .58 for short-form scores. Corresponding values were .46-.61 and .43-.56 for 30-50 months and .37-.50 and .36-.49 for 18-50 months. The correlations between the short-form and original scores were: for 18, 30 and 50 months, respectively, .94, .95 and .95 for shyness, .95, .95 and .94 for emotionality, .92, .92 and .92 for sociability, and .94, .96 and .95 for activity.

Base References/Primary Citations:

Buss, A. H., & Plomin, R. (1984). *Temperament: Early Developing Personality Traits*. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Mathiesen, K. S. & Tambs, K. (1999). The EAS Temperament Questionnaire—factor structure, age trends, reliability, and stability in a Norwegian sample. *Journal of Child Psychology and Psychiatry 40:* 431-439.

Modifications:

The wording on the following questions was changed from the original scale:
Original: Gets upset easily; MoBa: Gets upset or sad easily
Original: Finds people more stimulating than anything else; MoBa: Finds people more fun than anything else.

3. Rationale for choosing the questions:

The EAS temperament questionnaire seems to be the scale most directly constructed to measure the four temperament dimensions; Shyness (fear), Emotionality (irritability/anger), Sociability (Positive affect/including approach), and Activity (activity level), exclusively and in a clear-cut way, and is found to have good psychometric properties.

4. **Revision during the data collection period:**
   No revisions have been made.

28. Child Behaviour Checklist (CBCL)

1. Name of original scale: Child Behaviour Checklist (CBCL)

Q		Response options	Variable name
28	**The following list contains statements describing children's behavior and manner from the age of 2-3. Some of these features are temporary while others continue for a longer period of time. To what extent are the following statements true of your child's behavior during the last two months?**		
	1. Afraid to try new things	1-Not true 2-Somewhat or sometimes true 3-Very true or often true	GG313
	2. Can't concentrate, can't pay attention for long		GG314
	3. Can't sit still, restless or overactive		GG315
	4. Can't stand waiting, wants everything now		GG316
	5. Clings to adults or too dependent		GG317
	6. Constipated, doesn't move bowels		GG318
	7. Defiant		GG319
	8. Demands must be met immediately		GG320
	9. Disturbed by any change in routine		GG321
	10. Doesn't want to sleep alone		GG322
	11. Doesn't eat well		GG323
	12. Doesn't seem to feel guilty after misbehaving		GG324
	13. Eats or drinks things that are not food (don't include sweets)		GG325
	14. Gets in many fights		GG326
	15. Gets into everything		GG327
	16. Gets too upset when separated from parents		GG328
	17. Hits others		GG329
	18. Poorly coordinated or clumsy		GG330
	19. Punishment doesn't change his/her behavior		GG331
	20. Quickly shifts from one activity to another		GG332
	21. Resists going to bed at night		GG333
	22. Stomach aches or cramps (without medical cause)		GG334
	23. Sudden changes in moods or feelings		GG335
	24. Too fearful or anxious		GG336
	25. Vomiting, throwing up (without medical cause)		GG337
	26. Doesn't seem to be happy eating food (don't include sweets)		GG338

2. **Description of original instrument**: **Child Behaviour CheckList (CBCL)**

The Child Behaviour Checklist (CBCL), developed by Thomas Achenbach initially in 1982, is designed to identify problem behaviour in children. There are two versions of the checklist: the preschool checklist (CBCL/1½-5) with 100 questions and the school-age version (CBCL/6-18) with 120 questions. The CBCL contains seven subscales in addition to a category of "other problems". These are: Emotionally reactive, anxious/depressed, somatic complaints, withdrawn, sleep problems, attention problems and aggressive behaviour. The first four categories comprise a broader grouping of internalizing symptoms; the last two scales externalizing problems.

Psychometric Information:

All sub-scales of CBCL (2-3 years) showed good test-retest reliability ($p < .001$; $r = .71 - .93$). Interparental agreement was significant ($p < .01$) at both ages ($r = .63$ at age 2; $r = .60$ at age 3). All stability coefficients were significant at $p < .001$ over a 1-year period. The CBCL has adequate sensitivity (71%) and specificity (92%) (Achenbach,1992). The predicative validity has been demonstrated both in Danish and Norwegian samples (Bilenberg, 1999; Novik, 1999).
Cronbach's alpha is .79, for Q6.

Base References/Primary Citations:

Achenbach, T.M. (1992). *Manual for the Child Behaviour Checklist/2-3 and 1992 Profile. Burlington*. VT: University of Vermont Department of Psychiatry.

Bilenberg, N. (1999). The Child Behaviour Checklist (CBCL) and related material: standardization and validation in Danish population based and clinically based samples. *Acta Psychiatrica Scandinavica* 100: 2-52.

Novik, T. S. (1999). Validity of the Child Behaviour Checklist in a Norwegian sample. *European Child and Adolescent Psychiatry* 8: 247-254.

Modifications:
Items 12 (English: Doesn't seem to feel guilty after misbehaving; Norwegian: Det merkes ikke på barnet når hun/han har gjort noe galt.) and 19 (English: Punishment doesn't change his/her behavior; Norwegian: Grensesetting endrer ikke barnets atferd.) were given a slightly different wording due to common attitudes in Norway, where punishing small children is not accepted.
In item 3, "overactive" substituted for "hyperactive", because the latter is so heavily associated with ADHD.

3. **Rationale for choosing the questions:**
   The CBCL is a widely used method of identifying problem behaviour in children.

4. **Revision during the data collection period:**
   No revisions have been made.

29. Part I: Child Behavior and Manner

1. Name of the questions: questions about the child's behaviour and manner, derived from the diagnostic criteria for different developmental disorders described in the Diagnostic Statistic Manual.

Q		Response options	Variable name
29	**Some more statements follow about your child's behavior and manner. We are again asking to what extent you feel the statements are true of your child during the last two months?**		
	1. Becomes distracted or diverted by outside stimuli (sounds or events)	1-Not true 2-Somewhat or sometimes true 3-Very true or often true	GG339
	2. Finds it difficult waiting his/her turn		GG340
	3. Has problems keeping focused on tasks or activities		GG341
	4. Is excessively talkative		GG342
	5. Doesn't differentiate between adults; behaves the same way with all of them		GG343
	6. Will wander after other adults, even if they are strangers		GG344
	7. Doesn't seem to listen when he/she is being spoken to		GG345
	8. Has a habit of rolling his/her head around or making humming sounds		GG346
	9. Mood can vary greatly from day to day		GG347
	10. Is extremely passive, needs help to get going		GG348

2. **Description of original questions**: **Questions about child behaviour and manner**
   The questions are derived from the diagnostic criteria for different developmental disorders described in the Diagnostic Statistic Manual (APA, 1994). Mothers are asked to indicate whether the statements regarding their children's behaviour and manner are not true, somewhat or sometimes true, or very true or often true.

   Psychometric Information:
   The internal consistency for the 10 items is .61 in the MoBa Q6.

   Base References/Primary Citations:
   American Psychiatric Association (1994). *Diagnostic and Statistical Manual of Mental Disorders (*4th edition). Washington, DC: American Psychiatric Association.

3. **Rationale for choosing the questions:**
   These questions are meant to address issues on child behaviour and manner not covered elsewhere in Q6.

4. **Revision during the data collection period:**
   No revisions have been made.

29. Part II: The Infant-Toddler Social and Emotional Assessment (ITSEA)

1. Name of the scale: The Infant-Toddler Social and Emotional Assessment (ITSEA)

Q		Response options	Variable name
29	**Some more statements follow about your child's behavior and manner. We are again asking to what extent you feel the statements are true of your child during the last two months?**		
	11. "Tests" other children to see whether they get angry	1-Not true 2-Somewhat or sometimes true 3-Very true or often true	GG349
	12. Becomes aggressive when he/she is frustrated		GG350
	13. His/her body is affected by twitches or contortions that seem difficult to control (e.g. eyes, mouth, nose or legs)		GG351
	14. Hits, shoves, kicks and bites other children (not including siblings)		GG352
	15. Is very anxious about getting dirty		GG353
	16. Wants things to be clean and tidy		GG354
	17. Places toys or other objects in a certain order/sequence over and over again		GG355
	18. Wakes up in the night and needs help to get back to sleep		GG356
	19. Gets distressed when you go out and he/she is going to be looked after by family or a babysitter he/she knows		GG357
	20. Does things he/she is not allowed to do to attract attention from adults		GG358
	21. Seems to have less fun than other children		GG359
	22. Is extremely noisy. Shouts and screams a lot		GG360
	23. Is disobedient or defiant (e.g. refuses to do anything you ask)		GG361
	24. Comes over to you when something happens that makes him/her afraid or anxious		GG362
	25. Runs off when you are outside		GG363
	26. Seems to have less energy		GG364
	27. Is very fussy when it comes to food		GG365
	28. Seems to be unhappy, sad or depressed		GG366
	29. Wakes up several times in the night		GG367
20	**About your child's social skills**		
	6. Your child pays careful attention when you try to teach him/her something new	1-Not true, 2-Somewhat true, 3-Very true	GG236

2. Description of original questions: **Infant-Toddler Social and Emotional Assessment (ITSEA)**

The ITSEA (Carter, et al., 2003) assess four broad domains of behaviour (i.e. Externalizing, Internalizing, Dysregulation and Competencies). In addition, Maladaptive, Atypical Behaviour, and social relatedness indices are included to assess more serious problems, which tend to have low base rates of occurrence. The core components of the ITSEA (all scales excluding Atypical and Social Relatedness indices and the individual items of clinical significance) comprise 139 items. The complete ITSEA includes 166 items. Items are rated on the following 3-point scale: Not true, Somewhat/sometimes true, and Very true/often true. Only a subset of ITSEA items was selected into use for the MoBa. The items selected were based on which symptom clusters should be covered in the 36 months questionnaire. Primary selection of items was based on CBCL and only when appropriate items could not be found on the CBCL, items from ITSEA were selected.

Psychometric Information:

Test–retest reliability was evaluated in 93 families who completed the ITSEA within a 44-day time interval (M D 26:81, SD D 7:83). Test–retest coefficients for domains ranged from .82 to .90 and from .69 to .85 for scales. Information on inter rater agreement was available for 100 mother–father pairs. Agreement between mothers and fathers based on intraclass correlation coefficients (ICC) ranged from .58 to .79 for domains (Mean ICC D 0:71) and from .43 to .78 for scales (Mean ICC D 0:64) (Carter, et al., 2003).

Base References/Primary Citations:

Carter, A.S. et al. (2003). The Infant-Toddler Social and emotional Assessment (ITSEA): Factor Structure, Reliability, and Validity. *Journal of Abnormal Child Psychology 31 (5): 495-514.*

3. **Rationale for choosing the questions:**
   Items from ITSEA were selected due to their relevance for describing symptoms of behavioral and emotional difficulties in children as young as 36 months of age.

4. **Revision during the data collection period:**
   No revisions have been made.

30. Child Feeding Questionnaire (CFQ)

1. Name of Instrument: Child Feeding Questionnaire (CFQ)

Q		Response options	Variable name
30	**About your child's eating habits and appetite and your attitude to them**		
	1. I have to be sure that my child does not eat too many sweet things (sweets, ice cream, cakes or pastries)	1-Totally disagree 2-Slightly disagree 3-Neither/nor 4-Slightly agree 5-Totally agree	GG368
	2. I have to be sure that my child does not eat too many high-fat foods		GG369
	3. I have to be sure that my child does not eat too much of his/her favorite food		GG370
	4. I intentionally keep some foods out of my child's reach		GG371
	5. I offer sweet things (sweets, ice cream, cakes, pastries) to my child as a reward for good behavior		GG372
	6. I offer my child his/her favorite foods in exchange for good behavior		GG373
	7. If I did not guide or regulate my child's eating he/she would eat too many junk foods		GG374
	8. If I did not guide or regulate my child's eating he/she would eat too much of his/her favorite foods		GG375
	9. My child should always eat all of the food on his/her plate		GG376
	10. I have to be especially careful to make sure that my child eats enough		GG377
	11. If my child says: "I'm not hungry", I try to get him/her to eat anyway		GG378
	12. If I did not guide or regulate my child's eating, he/she would eat much less than he/she should		GG379

2. **Description of original Instrument**: **The Child Feeding Questionnaire (CFQ)**
The Child Feeding Questionnaire (CFQ; Birch, et al., 2001) is a 31-item self-report questionnaire that measures three aspects of parental control in child feeding and four aspects of parental perceptions and concerns about child obesity using a 5-point Likert scale. The parental control subscales include restriction (8 items), pressure to eat (4 items), and monitoring of eating (3 items). The parental perceptions and concerns subscales include responsibility for feeding (13 items), perceived weight of parent (4 items), perceived weight of child (1-6 items) and concern about child weight (3 items). In MoBa, all items from the subscales of *Restriction* and *Pressure to eat* are included.

Psychometric Information:
Birch et al. (2001) reported coefficient alphas of .88 (Responsibility), .71 (Parent weight), .83 (Child weight), .75 (Concern about child weight), .70 (Pressure to eat), .73 (Restriction), and .92 (Monitoring) for the CFQ subscales. The validity of the CFQ has also been confirmed among samples of Hispanic and African-American parents (Anderson, et al., 2005) and in Japanese populations (Geng, et al., 2009).

Base References/Primary Citations:
Birch L.L., Fisher J.O., Grimm-Thomas K., Markey C.N., Sawyer R. & Johnson S.L. (2001). Confirmatory factor analysis of the Child Feeding Questionnaire: a measure of parental attitudes, beliefs and practices about child feeding and obesity proneness. *Appetite* 36: 201-210.

Anderson, C. B., Hughes, S. O., Fisher, J. O., & Nicklas, T. A. (2005). Cross-cultural equivalence of feeding beliefs and practices: The psychometric properties of the child feeding questionnaire among Blacks and Hispanics. *Preventive Medicine* 41(2): 521–531.

Geng, G. Zhu, Z. Suzuki, K. Tanka, T. Ando, D. Sato, M. & Yamagata, Z. (2009). Confirmatory factor analysis of the Child Feeding Questionnaire in Japanese elementary school children. *Appetite* 52: 8-14.

3. **Rationale for choosing the questions:**
The CFQ is one of few existing measures assessing child feeding and perhaps the most widely used (Anderson, et al., 2005).

4. **Revision during the data collection period:**
   No revisions have been made.

31. Maternal Concerns

1. Name of questions: About the mother's concerns about the child's development

Q		Response options	Variable name
31	**About your concerns**		
	1. Are you concerned because your child is demanding and difficult to cope with?	1-No 2-Yes	GG380
	2. Have you every wondered if your child's hearing is impaired?		GG381
	3. Have others (family, nursery, health visitor) expressed concerns about your child's development?		GG382
	4. Are you concerned because your child is hardly interested at all in playing with other children?		GG594
	5. Do you have any other concerns about your child's health?		GG595
	If yes, specify____		GG596 (txt.)

2. Description of original questions: MoBa specific single questions

Psychometric Information:
Not relevant.

Base References/Primary Citations:
Not relevant.

3. Rationale for choosing the questions:
Mothers' concerns have a high degree of accuracy in detecting developmental and behavioral problems, an accuracy that represents a substantial improvement over disability detection rates usually found in medical settings using standardized instruments (Glascoe, 2003).

4. Revision during the data collection period:
Items 4 & 5 are not included in version A of Q6; No further revisions have been made.

Added reference:
Glascoe, F.P. (2003). Parent's evaluation of developmental status: How Well do Parents' Concerns Identify Children With Behavioral and Emotional Problems? *Clinical Pediatrics* 42:133-138.

Your child's everyday life and environment

32-33. Living with Father

1. **Name of original questions:** Question about whether the child's parents live together; if they do not, they are further asked how much time the child spends with the father and the father, respectively.

Q		Response options	Variable name
32	**Do you live with your child's father?**		
		1-No 2-Yes	GG383
33	**If your child does not live with his/her father, how much time does your child spend with him?**		
	Mother	1-More than half the time 2-Roughly half the time 3-At least once a week 4-At least once a month 5-Less often than once a month 6-Never	GG384
	Father		GG385

2. **Description of original questions: MoBa specific single questions**

   Psychometric Information:
   Not relevant.

   Base References/Primary Citations:
   Not relevant.

3. **Rationale for choosing the questions:**
   Questions were developed for MoBa to survey how much time children of parents who do not live together spend with each parent. There is evidence to support the positive influence of father engagement on offspring on social, behavioral and psychological outcomes (e.g. Marcia, 2006). Also, research has shown that living away from one's biological father is associated with a greater risk of adverse child and adolescent outcomes (Sarkadi, et al., 2008).

4. **Revision during the data collection period:**
   No revisions were in the questions.

Added references:

Marcia, C.J. (2006). Family Structure, Father Involvement, and Adolescent Behavioral Outcomes. *Journal of Marriage and Family* 68 (1): 137-154.

Sarkadi, A., Kristiansson, R., Oberklaid, F., Bremberg, S. (2008). Father's involvement and children's developmental outcomes: a systematic review of longitudinal studies. *Acta Pædiatrica* 97 (2): 153-158.

34-35. Brushing Teeth

1. Name of original questions: 2 questions about teeth health habits

Q		Response options	Variable name
34	**How often does your child have his/her teeth brushed?**		
		1-Twice a day or more 2-Once a day 3-Sometimes 4-Never	GG386
35	**Do you use fluoride toothpaste?**		
		1-No 2-Sometimes 3-Yes, usually	GG387

2. Description of original questions: MoBa specific single questions

Psychometric Information:
Not relevant.

Base References/Primary Citations:
Not relevant.

3. Rationale for choosing the questions:
Questions were developed to evaluate children's tooth health habits.

4. Revision during the data collection period:
No revisions have been made.

36. Exposure to Passive Smoke

1. Name of original questions: 2 questions about the child's exposure to passive smoke

Q		Response options	Variable name
36	**Is your child ever present in a room where someone smokes?**		
		1-Yes, every day 2-Yes, several times a week 3-Yes, sometimes 4-Don't know 5-No	GG388
	If yes, how many hours a day?	Number 0-99	GG389

2. Description of original questions: MoBa specific single questions

Psychometric Information:
Not relevant.

Base References/Primary Citations:
Not relevant.

3. Rationale for choosing the questions:
Questions were developed to survey the child's exposure to smoking. Passive smoking in childhood is associated with increased risk for a number of different illnesses and health outcomes (cf. Passive Smoking and Children at https://www.rcplondon.ac.uk/sites/default/files/documents/passive-smoking-and-children.pdf; article retrieved on 19.08.2014)

4. Revision during the data collection period:
No revisions have been made.

37. Time outside Home

1. Name of original question: one question about how much time the child spends outside

Q		Response options	Variable name
37	**How often is your child outside at present?**		
		1) Seldom 2) Frequently, but less than 1 hour a day on average 3)1-3 hours a day on average 4) More than 3 hours a day	GG390

2. Description of original questions: MoBa specific single questions

Psychometric Information:
Not relevant.

Base References/Primary Citations:
Not relevant.

3. Rationale for choosing the questions:
This question was developed to estimate how much time children spend outside. Time spent outside is found to correlate with physical activity, and also negatively correlated with obesity (see Hill, King and Armstrong, 2007, for a review).

4. Revision during the data collection period:
No revisions have been made.

Added reference:
Hills AP, King NA, Armstrong TP. 2007. The contribution of physical activity and sedentary behaviours to the growth and development of children and adolescents: implications for overweight and obesity. *Sports Medicine* 37 (6):533-45.

38. TV/Video

1. Name of original question: one question about how much time the child spends in front of a TV/video

Q		Response options	Variable name
38	**How many hours on average does your child sit in front of a TV/video every day?**		
		1) 4 hours or more 2) 3 hours 3) 1-2 hours 4) Less than 1 hour 5) Seldom/never	GG391

2. Description of original questions: MoBa specific single questions

Psychometric Information:
Not relevant.

Base References/Primary Citations:
Not relevant.

3. Rationale for choosing the questions:
Hours of TV/video viewing has been shown to be significantly positively associated with the acceleration of BMI growth from preschool to school age (Danner, 2008), and language delay (Weerasak & Pruksananonda, 2008).

4. Revision during the data collection period:
No revisions have been made.

Added references:

Danner, F.W. (2008). A National Longitudinal Study of the Association Between Hours of TV Viewing and the Trajectory of BMI Growth Among US Children. *Journal of Pediatric Psychology* 33 (10): 1100-1107.

Weerasak, C. & Pruksananonda, C. (2008). Television viewing associates with delayed language development. *Acta Pædiatrica* 97 (7): 9777-982.

39-40. Day Care Solution

1. Name of original questions: two questions about day care solution

Q		Response options	Variable name
39	**How is your child cared for during the day at the moment?**		
	At home with his/her mother		GG392
	At home with his/her father		GG393
	At home with an unqualified child minder		GG394
	At a child minder's/family crèche		GG395
	In an outdoor nursery		GG396
	In a nursery		GG397
40	**How many hours a week is your child looked after during the day by someone other than his/her mother or father?**		
		Number 0-99	GG597

2. Description of original questions: MoBa specific single questions

Psychometric Information:
Not relevant.

Base References/Primary Citations:
Not relevant.

3. Rationale for choosing the questions:
Questions were developed for MoBa to survey what day care solution parents choose for their children. Children who experience more organised and stimulating activities during the early years are more likely to have better developmental outcomes (NICHD Early Child Care Research Network, 2000).

4. Revision during the data collection period:
Question 40 is not included in version A. No further revisions have been made.

Added reference:
NICHD Early Child Care Research Network. 2000. The relation of child care to cognitive and language development. *Child Development* 71:960-980.

Diet

41-43. Frequency of Intake

1. Name of original questions: questions about frequency of intake

Q		Response options	Variable name
41	**How often does your child drink or eat the following at present?** *(Select the frequency which is most applicable on average.)*		
	1. Whole milk, sweet/sour		GG398
	2. Low-fat, extra low-fat, skimmed milk, sweet/sour		GG399
	3. Yogurt, natural		GG598
	4. Yogurt / yogurt drink with fruit		GG400
	5. Yogurt with active Lactobacillus, all types		GG401
	6. Juice		GG402
	7. Cordial / nectar / squash / fizzy drinks, sweetened		GG403
	8. Cordial / squash / fizzy drinks, with artificial sweeteners		GG404
	9. Meat filling (liver paste, ham, etc.)		GG405
	10. Fish filling (mackerel, caviar, etc.)		GG406
	11. Brown cheese, brown cheese spread		GG407
	12. Other types of cheese		GG408
	13. Jam, honey, chocolate spread, other sweet spread		GG409
	14. Eggs, boiled, fried, scrambled		GG410
	15. Other filling		GG411
	Other filling, specify_____		GG412 (txt.)
	16. Fruit		GG413
	17. Raisins		GG414
	18. Ice cream		GG415
	19. Ice lolly /popsicle		GG416
	20. Biscuits		GG417
	21. Buns, cakes, waffles		GG418
	22. Chocolate		GG419
	23. Sweets, jelly babies, etc.		GG420
	24. Crisps, potato snacks		GG421
42	**How many slices of bread/crisp bread does your child eat every day?**		
		Number 0-99	GG422
	How many of these include fibre-rich bread/crisp bread (e.g. rye bread, Fedons bread)?	Number 0-99	GG599
43	**How often does your child eat the following at present?** *(Select the frequency which is most applicable on average.)*		
	1. Meat, meatballs, sausages, etc.		GG423
	2. Oily fish (salmon, herring, etc.)		GG424
	3. White fish (cod, coley, etc.)		GG425
	4. Fish pudding, fish cakes, fish balls, etc.		GG426
	5. Soup		GG427
	6. Pancakes		GG428
	7. Potatoes		GG429
	8. Pasta, spaghetti, noodles		GG430
	9. Pizza		GG431
	10. Rice		GG432
	11. Cooked vegetables		GG433
	12. Raw vegetables, salad		GG434

2. Description of original questions: MoBa specific single questions

The questions are derived from the Food Frequency Questionnaire (FFQ; see http://www.framinghamheartstudy.org/share/protocols/ ffreq1_7s_protocol. pdf). The checklist of foods and beverages is selected based on knowledge of Norwegian 3-year-old children's food habits.

Psychometric Information:
The checklist has not yet been validated.

Base References/Primary Citations:
Not relevant.

3. **Rationale for choosing the questions:**
   The checklist will allow for estimating dietary patterns, healthy index, sugar and fat intake, but it will not be possible to calculate energy or nutrient intake.

4. **Revision during the data collection period:**
   The second question of section 42, “How many of these include fiber-rich bread/crisp bread (e.g. rye bread, Fedons bread)” is not included in version A. No further revisions have been made.

About yourself

44. Civil Status

1. **Name of original questions:** About the mother's civil status

Q		Response options	Variable name
44	**What is your civil status at the moment?**		
		1-Married 2-Cohabiting 3-Single 4-Divorced/separated 5-Widowed 6-Other	GG435

2. **Description of original questions: MoBa specific single questions**

   Psychometric Information:
   Not relevant.

   Base References/Primary Citations:
   Not relevant.

3. **Rationale for choosing the questions:**
   This is a standard measure of marital status.

4. **Revision during the data collection period:**
   No revisions have been made.

45-48. Work

1. **Name of original questions:** Questions about the mother's work situations, working hours, and absence from work

Q		Response options	Variable name
45	**Are you in paid employment at the moment?**		
		1- No 2- Yes	GG436
	Usual number of hours per week	Number 0-999	GG437
46	**What type of working pattern do you have?**		
	Permanent day work		GG438
	Shift work/rota system		GG439
	Permanent afternoon/evening work		GG440
	Non-permanent (relief cover, relief on-call, supply, etc.)		GG441
	Permanent night work		GG442
47	**How many days altogether were you absent from work last year (excluding holidays and time off in lieu)?**		
	_____days	Number 0-999	GG443
48	**What was the reason for this?**		
	Leave		GG444
	Own illness		GG445
	Own illness, specify_____		GG448 (txt.)
	Sick child		GG446
	Other		GG447

2. **Description of original questions: MoBa specific single questions**

   Psychometric Information:
   Not relevant.

   Base References/Primary Citations:
   Not relevant.

3. **Rationale for choosing the questions:**
   Questions were developed to measure the mother's work situations, working hours, and absence from work.

4. **Revision during the data collection period:**
   No revisions have been made.

49-51. Social Support

1. Name of original questions: 3 questions about social relations and social support

Q		Response options	Variable name
49	**Do you often feel lonely?**		
		1-Almost never 2-Infrequently 3-Sometimes 4-Usually 5-Almost always	GG449
50	**Do you have anyone other than your husband/partner you can ask for advice in a difficult situation?**		
		1- No 2-Yes, 1 or 2 people 3-Yes, more than 2 people	GG450
51	**How often do you see or talk on the telephone with your family (other than your husband/partner and children) or close friends?**		
		1) Once a month or less 2) 2-8 times a month 3) More than twice a week	GG451

2. Description of original questions: MoBa specific questions

Psychometric Information:
Not relevant

Primary citation/ base reference:
Not relevant

3. Rationale for choosing the questions:
Social support and social relations are related to personal health and happiness (see Reblin & Uchino, 2008 for a review).

4. Revision during the data collection period:
In father questionnaire, the word 'husband' in the first 2 items has been replaced with 'wife'. The last item 'Do you often feel lonely?' is not included in Q-8year. No further revisions have been made.

Added reference:
Reblin, MA & Uchino BN. 2008. Social and emotional support and its implication for health. *Current Opinion in Psychiatry* 21(2): 201–205.

52. Life Time History of Major Depression (LTH of MD)

1. Name of original Scale: Life Time History of Major Depression (LTH of MD)

Q	Response options/ Variable name						
52	**Have you ever experienced the following, since you became pregnant with this child, for a consecutive period of two weeks or more?**						
			Version A	*Versions B, C & D*			
			1-yes 2-No	No	Yes, during this pregnancy	Yes, during first year after birth	Yes, during the last 2 years
	1. Felt depressed, sad		GG452	GG634	GG635	GG636	GG637
	2. Had problems with appetite or eaten too much		GG453	GG638	GG639	GG640	GG641
	3. Been bothered by lack of energy		GG454	GG642	GG643	GG644	GG645
	4. Blamed yourself and felt worthless		GG455	GG646	GG647	GG648	GG649
	5. Had problems with concentration or had problems making decisions		GG456	GG650	GG651	GG652	GG653
	6. Had at least 3 of the problems named above simultaneously		GG457	GG654	GG655	GG656	GG657

2. Description of original questions: MoBa specific questions

These items closely correspond to the DSM-III criteria for lifetime major depression. DSM criteria are met when i) three types of symptom items are endorsed, ii) one of these is the first, felt depressed, and iii) three types of symptoms occurred simultaneously. The criteria also include that the depression was not caused by some externally negative incident.

Psychometric Information:

The reliability of the scale was tested by a new examination a year later, now using the CIDI structured interview. The correspondence was rather modest (kappa = 0.34, tetrachoric r = 0.56) (Kendler, et al., 1993).

Base References/Primary Citations:

Kendler, K. S., Neale, M. C., Kessler, R. C., Heath, A.C. and Eaves, L.J. (1993). The lifetime history of major depression in women: reliability of diagnosis and heritability, *Archives of General Psychiatry, 50*, 863-870.

3. Rationale for choosing the questions:

The questions aim to measure lifetime symptoms of depression. The measurement precision is not impressing, probably primarily because people tend to forget their problems earlier in life, but no alternative measure of life time depression was available.

4. Revision during the data collection period:

In version A, the answer is coded as “yes” or “no”, while in the last three versions, the response categories are divided into “no”, “yes, during pregnancy”, “yes, during the first year after birth”, and “yes, during the last 2 years”.

53-58. Health and Health Problems

1. Name of original questions: One question about whether the mother is pregnant now, followed by questions about their health and physical problems after birth

Q		Response options	Variable name
53	**Are you pregnant now?**		
		1-No 2-Yes	GG448
54	**Have you had any long-term illness or health problems that have occurred during the last 3 years?**		
Version A	Physical problem	1-No 2-Yes, before 3-Yes, now	GG459
	Mental problem	1-No 2-Yes, before 3-Yes, now	GG462
Versions B, C & D	Physical problem	No	GG658
		Yes, before	GG659
		Yes, now	GG660
	Mental problem	No	GG661
		Yes, before	GG662
		Yes, now	GG663
All versions	Physical problem	Yes, before, describe_____	GG460 (txt.)
		Yes, now, describe_____	GG461 (txt.)
	Mental problem	Yes, before, describe_____	GG463 (txt.)
		Yes, now, describe_____	GG464 (txt.)
55	**Have you yourself been examined at the hospital during the last 3 years?**		
		1-No 2-Yes	GG465
		If yes, which hospital?	GG466 (txt.)
56	**Do you have any of the following problems at the moment?**		
	Problems	*How often do you have problems?* 1) Never 2)1-4 times a month 3) 1-6 times a week 4) Once a day 5) More than once a day	*How much at a time?* 1-Drops 2-Large amounts
	1. Incontinence when coughing, sneezing or laughing	GG467	GG468
	2. Incontinence during physical activity (running/jumping)	GG469	GG470
	3. Incontinence with a strong need to urinate	GG471	GG472
	4. Problems with retaining faeces	GG473	**N/A**
	5. Problems with flatulence	GG474	
57	**How physically active are you?** We are asking you here about the duration of activities where you get out of breath or sweat. How often does this happen? Include activities both at home and at work.		
	Less than 30 minutes	1)Never 2) Less than once a week 3) Once a week 4) Twice a week 5) 3-4 times a week 6) 5 times or more a week	GG475
	Between 30 and 60 minutes		GG476
	More than 60 minutes		GG477
58	**Overall, how would you describe your physical health?**		
		1-Very good 2-Good 3-Poor 4-Very poor	GG478

2. Description of original questions: MoBa specific single questions

Psychometric Information:
Not relevant.

Base References/Primary Citations:

Not relevant.

3. **Rationale for choosing the questions:**
   Questions were developed to survey the mothers' physical health, mental health and health problem.

4. **Revision during the data collection period:**
   The specification on absence/presence of physical/mental health problems is included in versions B, C, and D as separate variables, whereas in version A they are alternatives of one single variable (see table above).

59-62. Intake of Nicotine and Alcohol

1. Name of original questions: 4 questions about the mother's intake of nicotine and alcohol

Q		Response options	Variable name
59	**Do you smoke at present**		
		1-Don't smoke 2-Smoke sometimes 3-Smoke every day	GG479
	Smoke sometimes- number of cigarettes per week:	Number 0-999	GG480
	Smoke every day- number of cigarettes per day:	Number 0-999	GG481
60	**Do you take**		
	Chewing tobacco/snuff		GG482
	Nicotine chewing gum		GG483
	Nicotine patches		GG484
	Nicotine inhaler		GG485
61	**How often do you consume alcohol at present?**		
		1) Roughly 6–7 times a week 2) Roughly 4–5 times a week 3) Roughly 2-3 times a week 4) Roughly once a week 5) Roughly 1-3 times a month 6) Less than once a month 7) Never	GG486
62	**How many alcohol units do you usually drink when you consume alcohol?**		
		1) 10 or more 2) 7–9 3) 5–6 4) 3–4 5) 1–2 6) Less than 1	GG487

2. Description of original questions: MoBa specific single questions

Psychometric Information:
Not relevant.

Base References/Primary Citations:
Not relevant.

3. Rationale for choosing the questions:
Questions were developed to measure the mothers' of present intake of nicotine and alcohol.

4. Revision during the data collection period:
No revisions have been made.

63. Experiences of Physical or Sexual Assaults

1. Name of original questions: questions about the mother's intake of nicotine and alcohol

Q		Response options	Variable name
63	**Have you experienced any of the following during the last 3 years:**		
	Being hit, kicked or attacked physically in any other way?	1-No 2-Yes	GG489
	Being pressured into having sexual intercourse?		GG490

2. Description of original questions: MoBa specific single questions

Psychometric Information:
Not relevant.

Base References/Primary Citations:
Not relevant.

3. Rationale for choosing the questions:
Questions were developed to survey the mothers' experiences of physical or sexual assaults.

4. Revision during the data collection period:
No revisions have been made.

64-67. Eating Disorders

1. Name of original questions: Questions on eating disorders and behaviours

Q		Response options	Variable name
64	**Have you during the last 6 months or at any time previously:**		
	Thought yourself that you were too fat?		GG491
	Been really afraid of putting on weight or becoming too fat?		GG492
	Heard others say that you were too thin, while you yourself thought that you were too fat?		GG493
	Thought that it was extremely important for your self-image to maintain a particular weight?		GG494
65	**Have you at some time during the last 18 months or previously in your life - for a period lasting at least 3 months – experienced any of the following situations, and if so, how frequently was this?**		
	You lost control while eating, and could not stop before you had eaten far too much?	1) At least twice a week 2) 1-4 times a month 3) Seldom/never	GG495
	Used vomiting to control your weight?		GG496
	Used laxatives to control your weight?		GG497
	Used fasting to control your weight?		GG498
	Used hard physical exercise to control you weight?		GG499
66	**Have you at some time during the last 18 months gone at least three months without a period in connection with a time when you have been having eating problems?**		
		1-No 2-Yes	GG500
67	**What is your current weight? How tall are you?**		
	Weight: _ _ _, _ kg		GG501
	Height : cm		GG502

2. Description of original questions: Questions on eating disorders and behaviors

The questions were designed in accordance with the DSM-IV (APA, 1994) diagnoses of Anorexia Nervosa (AN), Bulimia Nervosa (BN) and Eating Disorders Not Otherwise Specified (EDNOS).

Psychometric Information:

Similar diagnostic questions have been used in previous epidemiological studies in Norway (e.g. Reichborn-kjennerud, et al., 2003). Still, the questions are based on self-report and are intended to target more broadly defined disorders than diagnostic interviews (Bulik et al., 2007).

Base References/Primary Citations:

American Psychiatric Association (1994). *Diagnostic and Statistical Manual of Mental Disorders (*4th edition). Washington, DC: American Psychiatric Association.

Bulik C.M., Von Holle A., Hamer R., Berg C.K., Torgersen L., Stoltenberg C., Siega-Riz A.M., Sullivan P., and Reichborn-Kjennerud T. (2007). Patterns of remission, continuation, and of broadly defined eating disorders in the Norwegian Mother and Child Cohort Study (MoBa). *Psychological Medicine* 10: 1-10.

Reichborn-Kjennerud T, Bulik CM, Kendler KS, Røysamb E, Maes H, Tambs K, Harris JR. 2003. Gender differences in binge-eating: a population-based twin study. *Acta Psychiatrica Scandnavica* 108(3):196-202.

3. Rationale for choosing the questions:

These questions are intended to bring about algorithms that define some specific subtypes of eating disorders (Bulik et al., 2007).

4. Revision during the data collection period:

No revisions have been made.

68. Adult ADHD

1. Name of original scale: Adult ADHD Self-Report Scale (ASRS Screener)

Q		Response options	Variable name
68	**Feeling of agitation and restlessness.** *(Enter a cross in a box for the items that apply to you best during the last 6 months.)*		
	1. How often do you have trouble wrapping up the final details of a project, once the challenging parts have been done?	1-Never 2-Rarely 3-Sometimes 4-Often 5-Very often	GG503
	2. How often do you have difficulty getting things in order when you have to do a task that requires organisation?		GG504
	3. When you have a task that requires a lot of thought, how often do you avoid or delay getting started?		GG505
	4. How often do you have problems remembering appointments or obligations?		GG506
	5. How often do you fidget or squirm with your hands or feet when you have to sit down for a long time?		GG507
	6. How often do you feel overly active and compelled to do things, like you were driven by a motor?		GG508

2. Description of original instrument: Adult ADHD Self-Report Scale (ASRS Screener)

Adult ADHD Self-Report Scale (ASRS; Kessler et al.,2005) is a self-report screening scale of adult attention deficit/hyperactivity disorder (ADHD). This scale was originally developed in conjunction with revision of the WHO Composite International Diagnostic Interview (CIDI) and includes 18 questions concerning the frequency of recent DSM-IV Criterion A - symptoms of adult ADHD. A short form of the ASRS (ASRS screener), consisting of six questions, was developed by Kessler et al. (2007). Four questions (1-4) capture symptoms of inattention and two questions (5 & 6) entail symptoms of hyperactivity - impulsivity. The response options are “never”, “rarely”, “sometimes”, “often”, and “very often”.

Psychometric Information:

Due to the wide variation in symptom-level concordance, the unweighted six-question ASRS screener outperformed the unweighted 18-question ASRS in sensitivity (68.7% v. 56.3%), specificity (99.5% v. 98.3%), total classification accuracy (97.9% *vs*. 96.2%), _ (0.76 *vs*. 0·58), and OR (414.1 vs. 73.4) (Kessler et al., 2005). The internal consistency reliability of the continuous ASRS Screener was between .63-.72, while the test-retest reliability (Pearson’s correlations) was in the range of .58-.77. Furthermore, it seems like ASRS Screener measures the core aspects of adult ADHD, since the four-category version of ASRS Screener had strong concordance with clinical diagnoses with an AUC of .90 (Kessler et al., 2007).

Base References/Primary Citations:

Kessler R.C., Adler L., Ames M., Demler O., Faraone S., Hiripi E., Howes M. J., Jin R., Secnik, K., Spencer T., Ustun T.B. and Walters E.E. (2005). The World Health Organization adult ADHD self-report scale (ASRS): a short screening scale for use in the general population. *Psychological Medicine* 35(2):245-256.

Kessler R.C., Adler L., Gruber M.J., Sarawate C.A., Spencer T. and Van Brunt D.L. (2007). Validity of the World Health Organization Adult Self-Report Scale (ASRS) Screener in a representative sample of health plan members. *International Journal of Methods in Psychiatric Research* 16(2): 52-65.

3. Rationale for choosing the questions:

The self-administrating nature of the ASRS Screener and the small number of questions makes it a suitable instrument for screening in large population-based questionnaires and epidemiological studies (Kessler et al., 2005).

4. Revision during the data collection period:

No revisions have been made.

69. Relationship Satisfaction Scale (RSS)

1. Name of original scale: Relationship Satisfaction Scale (RSS)

Q		Response options	Variable name
69	**If you have a husband/boyfriend/partner, to what extent do you agree with the following descriptions?**		
	1. My partner and I have problems in our relationship	1-Agree completely 2-Agree 3-Agree somewhat 4-Disagree somewhat 5-Disagree 6-Disagree completely	GG509
	2. I am very happy with our relationship		GG510
	3. My partner is generally understanding		GG511
	4. I am satisfied with my relationship with my partner		GG512
	5. We agree on how our child should be raised		GG513

2. Description of original instrument: The Relationship Satisfaction Scale (RSS)

The RSS is a 10-item scale developed originally in Norwegian for the MoBa. The scale is based on core items used in previously developed measures of marital satisfaction and relationship quality (e.g. Blum & Mehrabian, 1999; Henrick, 1988; Snyder, 1997). All answers are scored on a 6-point scale from 'strongly agree' (1) to 'strongly disagree' (6).

Psychometric Information:

Internal reliability of the RS10 is high (alpha: .85-.90). Confirmatory factor analyses provide evidence for a unidimensional structure, high loadings and good fit. The RSS correlates .92 with the Quality of Marriage Index (QMI: Norton, 1983). Predictive validity is evidenced by ability to predict future break-up/divorce and life satisfaction (Dyeardal et al., 2011; Røsand, et al., 2013; Røysamb, Vittersø & Tambs, 2014). The 5-item short version (RS5) was empirically derived by identifying the best items in terms of accounting for variance in the full sum-score index. Multiple regression and factor analyses were used (Røysamb, Vittersø & Tambs, 2014). The short version correlates .97 with the full scale.

Base References/Primary Citations:

Blum, J. & Mehrabian, A. (1999). Personality and temperament correlates of marital satisfaction. *Journal of Personality* 67 (1): 93-125.

Dyeardal, G.M., Røysamb, E., Nes, R. B. & Vittersø, J. (2011). Can a happy relationship predict a happy life? A population-based study of maternal well-being during the life transition of pregnancy, infancy, and toddlerhood. *Journal of Happiness Studies 12*(6): 947- 962.

Gustavson, K., Nilsen, W., Ørstavik, R. & Røysamb, E. (2014). Relationship quality, divorce, and well-being: Findings from a three-year longitudinal study. *The Journal of Positive Psychology* 9(2): 163-174.

Henrick, S. S. (1988). A generic measure of relationship satisfaction. *Journal of Marriage and the Family 50*: 93-98.

Norton, R. (1983). Measuring marital quality: A critical look at the dependent variable. *Journal of Marriage and the Family 45*: 141-151.

Røsand, G-M. B., Slinning, K., Røysamb, E. & Tambs, K. (2013). Relationship dissatisfaction and other risk factors for future relationship dissolution: a population-based study of 18,523 couples. *Social Psychiatry and Psychiatric Epidemiology 49*(1): 109-119.

Røysamb, E., Vittersø, J. & Tambs, K. (2014). The Relationship Satisfaction scale: Psychometric properties. *Norwegian Journal of Epidemiology [Norsk Epidemiologi]* 24(1-2): 187-194.

Snyder, D. K. (1997). *Marital Satisfaction Inventory–Revised (MSI-R) Manual*. Los Angeles: Western Psychological Services.

3. **Rationale for choosing the questions:**
   Partner relationship is considered a central aspect of family life. Relationship satisfaction is both an outcome *per se* and a potentially important predictor of mental health, well-being, divorce, and child-rearing.

4. **Revision during the data collection period:**
   No revisions have been made.

70. Depression/Anxiety

1. Name of original scale: Selective items from the (Hopkins) Symptoms Checklist-25 (SCL-25)

Q		Response options	Variable name
70	**Have you been bothered by any of the following during the last two weeks?**		
	1. Feeling fearful	1-Not bothered 2-A little bothered 3-Quite bothered 4-Very bothered	GG514
	2. Nervousness or shakiness inside		GG515
	3. Feeling hopeless about the future		GG516
	4. Felling blue		GG517
	5. Worrying too much about things		GG518
	6. Feeling everything is an effort		GG519
	7. Feeling tense or keyed up		GG520
	8. Suddenly scared for no reason		GG521

2. Description of original instrument: The Hopkins Symptoms Checklist-25 (SCL-25)

The Hopkins Symptoms Checklist with 90 items (SCL-90) measures several types of symptoms of mental disorders, two of which are anxiety and depression. The instrument was originally designed by Derogatis, Lipman & Covi (1973) at Johns Hopkins University. The SCL-25 was derived from the SCL-90 and measures symptoms of anxiety (10 items) and depression (15 items) (Hesbacher et al, 1980). Eight of the selected items in this section constitute the short version SCL-8 (Tambs & Røysamb, 2014). Four items (i.e. 1, 2, 7 & 8) capture symptoms of anxiety and four items (i.e. 3, 4, 5 & 6) tap symptoms of depression. The scale for each question includes four categories of response ("not bothered," "a little bothered," "quite bothered," "very bothered," rated 1 to 4, respectively).

Psychometric Information:

A concordance rate of 86.7% was demonstrated between the assessment by the physician and the patient's own rating of distress on the SCL-25 (Hesbacher, et al., 1980). Using and available data material (Tambs & Moum, 1993), the SCL-8 scores were estimated to correlate 0.94 with the total score from the original instrument. The correlations between the SCL-8 anxiety and depression scores and the original anxiety and depression scores were 0.90 and 0.92, respectively (Tambs & Røysamb, 2014). The alpha reliability was estimated at 0.88, 0.78 and 0.82 for the SCL-8 total, anxiety and depression scores, respectively (Tambs & Røysamb, 2014).

Base References/Primary Citations:

Derogatis, L.R., Lipman, R.S. & Covi L. 1973. The SCL-90: an outpatient psychiatric rating scale. *Psychopharmacology Bulletin* 9: 13-28.

Hesbacher PT, Rickels R, Morris RJ, Newman H, & Rosenfeld MD. 1980. Psychiatric illness in family practice. *Journal of Clinical Psychiatry* 41: 6-10.

Strand, B.H., Dalsgard, O.S., Tambs, K., & Rognerud, M. 2003. Measuring the mental health status of the Norwegian population: A comparison of the instrument SCL-25, SCL-10, SCL-5 and MHI-5 (SF-36). *Nordic Journal of Psychiatry* 57: 113-118.

Tambs, K. & Moum, T. 1993. How well can a few questionnaire items indicate anxiety and depression? *Acta Psychiatrica Scandnavica* 87: 364-367.

Tambs, K. & Røysamb E. 2014. Selection of questions to short-form versions of original psychometric instruments in MoBa. *Norsk Epidemiologi* 24:195-201.

3. Rationale for choosing the questions:

Symptom Check List and its short versions have proven to be a brief, valid and reliable measure of mental distress (Tambs & Moum, 1993).

4. **Revision during the data collection period:**
   No revisions have been made.

1. Adverse Life Events

1. Name of original questions: Questions about adverse life events

Q		Response options & variable name	
71	**Have you experienced any of the following situations since the previous questionnaire? If yes, how painful or difficult was this for you?**		
		1-No 2-Yes	*If yes:* 1-Not too bad 2-Painful/difficult 3-Very painful/difficult
	1. Have you had problems at work or where you study?	GG522	GG523
	2. Have you had financial problems?	GG524	GG525
	3. Have you been divorced, separated or ended the relationship with your partner?	GG526	GG527
	4. Have you had any problems or conflicts with your family, friends or neighbors?	GG528	GG529
	5. Have you been seriously worried that there is something wrong with your child?	GG530	GG531
	6. Have you been seriously ill or injured?	GG532	GG533
	7. Has anyone close to you been seriously ill or injured?	GG534	GG535
	8. Have you been involved in a serious traffic accident, house fire or robbery?	GG536	GG537
	9. Have you lost someone close to you?	GG538	GG539
	10. Other	GG540	GG541

2. Description of original questions: Questions about adverse life events

These questions were selected primarily because of their relevance to the population in general, partly due to their relevance to women with small children. The questions are inspired by a list adopted from Coddington (1972), which was directed at children from preschool to senior high school. The questions in this section were adapted to adult respondents.

Psychometric Information:

No relevant psychometric information has been found.

Base Reference/Primary Citation:

Coddington, R.D. 1972. The significance of life events as etiologic factors in the diseases of children II: A study of a normal population. *Journal of Psychosomatic Research* 16: 205-213.

3. Rationale for choosing the questions:

The selected questions were chosen because they were believed to address life events that supposedly affect the mother and the family.

4. Revision during the data collection period:

No revisions have been made.

72. Differential Emotional Scale (DES), Enjoyment and Anger Subscales

1. Name of original scale: Differential Emotional Scale (DES), Enjoyment and Anger Subscales

Q		Response options	Variable name
72	**In your daily life, how often do you experience the following?**		
	1. Feel glad about something	1-Rarely or never 2-Hardly ever 3-Sometimes 4-Often 5-Very often	GG600
	2. Feel happy		GG601
	3. Feel joyful, like everything is going your way, everything is rosy		GG602
	4. Feel like screaming at somebody or banging on something		GG603
	5. Feel angry, irritated, annoyed		GG604
	6. Feel mad at somebody		GG605

2. Description of original instrument: The Differential Emotional Scale (DES)

The Differential Emotional Scale (DES; Izard, *et al*., 1993) derives from Izard's (1971) differential emotions theory. The DES consists of a series of subscales that capture various emotions. It is formulated around a thirty/forty-two-item adjective checklist, with three adjectives of each of the emotions. The DES has been developed through cross-cultural research and is thus considered to be emotion-specific. The scale comes in four forms. The items in this section were selected from Enjoyment and Anger subscales from DES-IV, which consists of 12 discrete subscales (Interest, Enjoyment, Surprise, Sadness, Anger, Disgust, Contempt, Fear, Shame, Shyness, and Guilt, Hostility Inward). Each item is administered on a 5-point (rarely/never to very often) scale.

Psychometric Information:

Construct validity of the DES has been documented for the different versions, including DES-IV (see e.g. Blumber & Izard, 1985; Kotsch, *et al*.,1982). For DES-IV, Alpha coefficients range from .56 to .85 (mean = .74). Internal reliability is .83 for Enjoyment and .85 for Anger (Izard *et al*., 1993).

Base References/Primary Citations:

Izard,CE, Libero, DZ, Putnam, P, & Haynes,O. (1993). Stability of emotion experiences and their relations to traits of personality. *Journal of Personality and Social Psychology* 64(5): 847-860.

Blumberg, S. H., & Izard, C. E. 1985. Affective and cognitive characteristics of depression in 10- and 11-year-old children. *Journal of Personality and Social Psychology* 49*:*194-202.

Izard, C. E. (1971). *The Face of Emotion*. New York, NY: Appleton-Century-Crofts.

Kotsch, W.E., Gerbing, D.W., and Schwartz, L.E. (1982). The construct validity of the Differential Emotional Scale as adapted for children and adolescents. In C.E. Izard (Ed.), *Measuring emotions in infants and children* (Vol. 1, pp. 251-278). Cambridge, England: Cambridge University Press.

3. Rationale for choosing the questions:

Enjoyment and anger represent basic emotional tendencies, typically not covered in symptom scales of mental health problems. The enjoyment sub-scale captures positive affect, considered a component of subjective well-being, and the anger sub-scale measures activated negative emotions that are not covered by typical symptom scales of distress.

4. Revision during the data collection period:

No revisions have been.

73. Satisfaction with Life Scale (SWLS)

1. Name of original scale: The Satisfaction With Life Scale (SWLS)

Q		Response options	Variable name
73	**Do you agree or disagree with the following statements?**		
	1. In most ways my life is close to my ideal	1- Disagree completely 2- Disagree 3- Disagree somewhat 4- Don't agree or disagree 5- Agree somewhat 6- Agree 7- Agree completely	GG606
	2. The conditions of my life are excellent		GG607
	3. I am satisfied with my life		GG608
	4. So far I have gotten the important things I want in life		GG609
	5. If I could live my life over, I would change almost nothing		GG610
	6. I really enjoy my work		GG611

2. Description of original instrument: **Satisfaction With Life Scale (SWLS)**

The SWLS (Diener et al., 1985) is a 5-item instrument designed to measure global cognitive judgments of satisfaction with one's life. All answers are scored on a 7-point scale from 'strongly disagree' (1) to 'strongly agree' (7).

Psychometric Information:

Internal consistency (Cronbach's alpha) for the SWLS is between .79 and .89. Test-retest coefficients are between .84 and .54, with the decline of stability of the scale over longer periods. The SWLS demonstrates adequate convergence with related measures (r=.28~.82), and it has been shown to have potential as a cross-cultural index of life satisfaction (Diener et al., 1985; Pavot & Diener, 1993; Pavot, et al., 1993; Shigehiro, 2006; Vittersø, Røysamb & Diener, 2002).

Base References/Primary Citations:

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction With Life Scale. *Journal of Personality Assessment* 49: 71-75.

Pavot, W., & Diener, E. (1993). Review of the Satisfaction With Life Scale. *Psychological Assessment*, 5, 164-172.

Pavot, W., Diener, E., Colvin, R., & Sandvik, E. (1991). Further validation of the Satisfaction with Life Scale: Evidence for the cross-method convergence of self-report well-being measures. *Journal of Personality Assessment* 57: 149-161.

Shigehiro, O. (2006). The concept of life satisfaction across culture: An IRT analysis. *Journal of Research in Personality* 40(4): 411-423.

Vittersø, J., Røysamb, E., & Diener, E. (2002). The concept of life satisfaction across cultures: Exploring its diverse meaning and relation to economic wealth. In E. Gullone & R. Cummins (Eds.), *The universality of subjective wellbeing indicators. A multidisciplinary and multi-national perspective* (pp. 81–103). Dordrecht, the Netherlands: Kluwer Academic Publishers.

3. Rationale for choosing the questions:

The Satisfaction With Life Scale is a well-established measure of life satisfaction.

4. Revision during the data collection period:

The instrument was used in all versions of Q6 except for version A.

74. Rosenberg Self Esteem Scale (RSES)

1. **Name of original Scale:** Selective questions from the Rosenberg Self-Esteem Scale (RSES)

Q		Response options	Variable name
74	**How do you feel about yourself?**		
	1. I have a positive attitude toward myself	1-Agree completely	GG612
	2. I feel completely useless at times	2-Agree	GG613
	3. I feel that I do not have much to be proud about	3-Disagree	GG614
	4. I feel that I am a valuable person, as good as anyone else	4-Disagree completely	GG615

2. **Description of original Instrument: The Rosenberg Self-Esteem Scale (RSES)**

The RSES (Rosenberg, 1965; 1986) is a 10-item scale, intended to measure global self-esteem. In the original version, half of the items are positively worded, while the other half negatively worded. Four of the selected items in this section constitute the short version of RSES (Tambs, 2004). Four response categories range from strongly agree to strongly disagree.

Psychometric Information:

Test-retest reliability ranges from .82 to .88. Cronbach's alpha ranges from .77 to .88 (Blascovich & Tomaka, 1993; Rosenberg, 1986). Alpha-reliability for the whole 10-item scale was .88 in a Norwegian sample of 250 youths (Ystgyeard, 1993). The four-item short version correlated .95 with the score based on the original 10-item scale, and the alpha reliability was estimated at .80 (Tambs, 2004).

Base References/Primary Citations:

Blascovich, J. & Tomaka, J. (1991). Measures of self-esteem. *Measures of personality and social psychological attitudes* 1:115-160.

Robinson, P.R. Shaver, and L.S. Wrightsman (eds.) (1991). *Measures of Personality and Social Psychological Attitudes (Third edition)*. Ann Arbor: Institute of Social Research.

Rosenberg, M. (1986). *Conceiving the Self*. Krieger: Malabar, FL.

Rosenberg, M. (1965). *Society and the Adolescent Self-image.* New Jersey: Princeton University Press.

Tambs, K. (2004). Valg av spørsmål til kortversjoner av etablerte psykometriske instrumenter. Ed. I. Sandanger, G. Ingebrigtsen, J.F. Nygård and K. Sørgyeard. *Ubevisst sjeleliv og bevisst samfunnsliv. Psykisk hele i en sammenheng. Festskrift til Tom Sørensen på hans 60-års dag*, 217-229. Nittedal: Nordkyst Psykiatrisk AS.

Ystgyeard, M. (1993). *Sårbar ungdom og sosialt støtte. En tilnærming til forebygging av psykisk stress og selvmord.* Oslo: Senter for sosialt nettverk og helse.

3. **Rationale for choosing the questions:**

The Rosenberg Self-Esteem Scale is one of the most widely used self-esteem measures in social science research.

4. **Revision during the data collection period:**

No revisions have been made in the questions.

75. Parental Locus of Control (PLOC)

1. Name of original scale: Parental Locus of Control (PLOC)

Q		Response options	Variable name
75	**Bringing up your child** *(Enter a cross to indicate whether you agree or disagree with the following statements.)*		
	1. What I do has little effect on my child's behaviour	1-Totally disagree 2-Partially disagree 3-Neither/nor 4-Partially agree 5-Totally agree	GG616
	2. My child is used to getting what he/she wants in any case, so there's no point in even trying to refuse him/her		GG617
	3. Cuddles and hugs are an important way of showing my child that I love him/her		GG618
	4. If my child and I have a disagreement it is usually easy to divert him/her		GG619
	5 My life is chiefly controlled by my child		GG620
	6. I think it is very important for my child to learn to deal with the fact he/she cannot get their own way on everything		GG621
	7. It is often easier to let my child have his/her own way than to put up with a tantrum		GG622
	8. Sometimes when I'm tired I let my child get to do things that I usually would not have allowed otherwise		GG623
	9. It isn't so important what strategies you use to bring up your children; if you love your children they will develop well		GG624

2. Description of original instrument: Parental Locus of Control (PLOC)

The purpose of the PLOC is to measure parental locus of control. The instrument measures five factors: parental efficacy, parental responsibility, child control of parents' life, parents' belief in fate/chance and parental control of child's behavior. Five of the questions (items 1, 2, 5, 7, 8) are derived from the PLOC, representing the factors parental efficacy (2 questions), child control of parents' life (1 question) and parental control of child's behavior (2 questions). The additional four items are derived from a short scale on positive upbringing developed for the MoBa purpose by Lie and Schjølberg (2005). All nine questions use a 5-point Likert scale from "totally disagree" (1) to "totally agree" (5).

Psychometric Information:

Cronbach alpha reliability coefficients for the five factors have been estimated to be 0.75, 0.77, 0.67, 0.75 and 0.65, respectively, while the reliability coefficient for the whole scale was estimated to be 0.92. The PLOC also showed good construct and discriminant validity (Campis, et al., 1986). The reliability for the nine items consisting of five PLOC items four other questions is 0.49, estimated from the MoBa data material.

Base References/Primary Citations:

Campis, L.K., Lyman, R.D., Prenticedunn S. 1986. The parental locus of control scale – development and validation. *Journal of clinical child psychology* 15: 260-267.

Lie, K.K. and Schjølberg, S. 2005. Short scale on positive upbringing (unpublished; personal communication).

3. Rationale for choosing the questions:

Both the questions from PLOC and the questions developed specifically for the MoBa study were included as a measure of parental locus of control in the parental practices.

4. Revision during the data collection period:

The 9 questions were used in all versions of Q6 except for version A.