

Questions Documentation

Questionnaire 5

when the child was 18 months old

The Norwegian Mother and Child Cohort Study (MoBa)

Mother Questionnaire

Version 1.0 March 2016 by Fufen Jin

This document describing the instruments used to construct the questionnaire has not been finally quality controlled. The document may contain some minor inaccuracy and will be subjected to revision. If you have any comments that may improve this document contact mobaadm@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:

Q5 has five versions (A, B, C, D and E). This instrument documentation is based on version D.

NOTE 2:

Questions to which the answers are written into open text fields are annotated with two variable names. The first indicates whether or not there is text; the second contains the actual text. 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.

About your child

1-3. Food and Drink: Beverage Consumption

1. Name of original questions: Questions related to baby's beverage consumption

Q	Version B, C, D, E	Response options / Variable name			
1	What type of milk has your baby been given since he/she was 6 months old?				
		<i>Child's age in months</i>			
	Milk type	6-8	9-11	12-14	15-18
	1. Breast milk	EE12	EE13	EE14	EE15
	2. Formula	EE16	EE17	EE18	EE19
	3. Formula in the case of milk intolerance	EE20	EE21	EE22	EE23
	4. Whole milk (sweet)	EE24	EE25	EE26	EE27
	5. Low-fat milk (sweet)	EE28	EE29	EE30	EE31
	6. Extra low-fat milk (sweet)	EE32	EE33	EE34	EE35
	7. Skimmed milk (sweet)	EE36	EE37	EE38	EE39
	8. Yogurt with active lactobacillus, all types	EE40	EE41	EE42	EE43
	9. Other yogurt	EE44	EE45	EE46	EE47
	10. Other types of sour milk	EE48	EE49	EE50	EE51
2	How often do you give your child the following to drink now that he/she is 18 months old? Select the frequency which is most applicable on average.				
	1. Breast milk			EE736	
	2. Formula			EE737	
	3. Formula in the case of milk intolerance			EE738	
	4. Whole milk			EE739	
	5. Low-fat milk	1) Never			EE740
	6. Extra low-fat milk			EE741	
	7. Skimmed milk	2) Less than once a week			EE742
	8. Yogurt, natural			EE743	
	9. Yogurt with fruit	3) 1-3 times a week			EE744
	10. Other types of sour milk			EE745	
	11. Tap water	4) 4-6 times a week			EE746
	12. Bottled water			EE747	
	13. Cordial, sweetened	5) 1-2 times in 24 hours			EE748
	14. Cordial, artificially sweetened	6) 3-4 times in 24 hours			EE749
	15. Juice			EE750	
	16. Fizzy drinks	7) 5 or more times in 24 hours			EE751
	17. Diet fizzy drinks			EE752	
	18. Other			EE753	
	Other, specify _____			EE67	
				EE701 (txt.)	
3	Do you give your child the following to drink during the night now that he/she is roughly 18 months old?				
	1. Water	1) Never/seldom			EE68
	2. Milk or cordial from a cup	2) Now and then			EE69
	3. Milk or cordial from a bottle	3) Yes, most night			EE70
	4. Breast milk			EE71	

*Some revisions have been made in question 2 from version A to the other versions. Question 2 in version A has instead 15 sub-questions with 4 response options, listed as below.

Q	Version A	Response options	Variable name
2	How often do you give your child the following to drink now that he/she is 18 months old?		
	1. Breast milk		EE52
	2. Formula		EE53
	3. Formula in the case of milk intolerance		EE54
	4. Low-fat skimmed milk	1) Never/seldom	EE55
	5. Yogurt with active lactobacillus, all types		EE56
	6. Other yogurt	2) 1-3 times a week	EE57
	7. Other types of sour milk		EE58
	8. Tap water	3) 4-6 times a week	EE59
	9. Bottled water		EE60
	10. Juice	4) At least once a day	EE61
	11. Cordial, with added sugar		EE62
	12. Cordial, artificially sweetened		EE63
	13. Fizzy drinks		EE64
	14. Diet fizzy drinks		EE65
	15. Other		EE66

2. Description of original questions: MoBa specific single questions

The questions were derived from the Food Frequency Questionnaire (FFQ; see http://www.framinghamheartstudy.org/share/protocols/ffreq1_7s_protocol.pdf). The checklist of beverages is selected based on knowledge of Norwegian 18-month-old children's drink 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:

Some revisions have been made in question 2 from version A to the other versions. Question 2 in version A has instead 15 sub-questions with 4 response options (see tables above).

4-6. Food and Drink: Food Consumption

1. Name of original questions: Questions related to baby's food consumption

Q	Version B, C, D, E	Response options	Variable name
4	How often do you give your child the following to eat now that he/she is 18 months old? Select the frequency which is most applicable on average.		
	1. Liver paste sandwich		EE754
	2. Meat sandwich		EE755
	3. Fish sandwich (e.g. sardines, mackerel)		EE756
	4. Cheese sandwich		EE757
	5. Jam/honey sandwich		EE758
	6. Sandwich with other filling	1) Never	EE759
	7. Baby porridge (instant)		EE760
	8. Home-made porridge	2) Less than once a week	EE761
	9. Meat, sausages, meat balls, etc.		EE762
	10. Fish, fish balls, fish pudding, etc.	3) 1-3 times a week	EE763
	11. Pancakes		EE764
	12. Potatoes	4) 4-6 times a week	EE765
	13. Pasta		EE766
	14. Rice	5) 1-2 times in 24 hours	EE767
	15. Peas, beans		EE768
	16. Other cooked vegetables	6) 3 or more times in 24 hours	EE769
	17. Raw vegetables		EE770
	18. Fruit		EE771
	19. Cakes/waffles/biscuits		EE772
	20. Dessert/ice cream		EE773
	21. Chocolate		EE774
	22. Other sweets, jelly beans, other confectionery		EE775
5	Do you give your child a home-made dinner or readymade (processed) baby food in a jar?		
		1-Only home-made 2-Mostly home-made 3-About half and half of each 4-Mostly ready-made 5-Only ready-made	EE95
6	How often do you give your child organic food/drink?		
	Sweet milk		EE97
	Butter milk/Yogurt	1-Never	EE98
	Vegetables/fruit	2-Sometimes	EE99
	Porridge/flour/bread	3-Often	EE100
	Meat	4-Almost always	EE101

*Some revisions have been made in question 4 from version A to the other versions. Question 4 in version A has instead 20 sub-questions with 4 response options (see table below). Version A also contains a question about whether or not the child was given organic food/drinks before the question 'How often do you give your child organic food/drink?', but was removed in the other versions.

Q	Version A	Response options	Variable name
4	How often do you give your child the following to eat now that he/she is 18 months old?		
	1. Liver paste sandwich	1) Never/seldom 2) 1-3 times a week 3) 4-6 times a week 4) At least once a day	EE72
	2. Meat sandwich		EE73
	3. Fish sandwich (e.g. sardines, mackerel)		EE74
	4. Cheese sandwich		EE75
	5. Jam/honey sandwich		EE76
	6. Sandwich with other filling		EE77
	7. Baby porridge (instant)		EE78
	8. Other type of porridge		EE79
	9. Meat, sausages, meat balls, etc.		EE80
	10. Fish, fish balls, fish pudding, etc.		EE81
	11. Potatoes		EE82
	12. Pasta		EE83
	13. Rice		EE84
	14. Peas, beans		EE85
	15. Other cooked vegetables		EE86
	16. Raw vegetables		EE87
	17. Fruit		EE88
	18. Yogurt/other sour milk products with fruit/berries		EE89
	19. Cakes/dessert		EE90
	20. Chocolate/sweets		EE91
6	Do you give your child organic food/drinks?		
		1-No 2-Yes 3-Don't know	EE96

2. Description of original questions: MoBa specific single questions

The questions were derived from the Food Frequency Questionnaire (FFQ; see http://www.framinghamheartstudy.org/share/protocols/ffreq1_7s_protocol.pdf). The checklist of foods is selected based on knowledge of Norwegian 18-month 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:

Some revisions have been made in question 4 from version A to the other versions. Question 4 in version A has instead 20 sub-questions with 4 response options. Version A also contains an extra question about whether or not the child was given organic food/drinks before the question 'How often do you give your child organic food/drink?', but was removed in the other versions (see tables above).

7-10. Food Allergy and Avoidance

1. Name of original questions: Questions related to baby's food allergy and avoidance

Q	Response options	Variable name
7	Does your child have a reaction to certain foods?	
	1-No 2-Yes 3-Don't know	EE102
8	If yes, what type of food does your child have a reaction to?	
	1. Whole milk	EE103
	2. Skimmed/low-fat milk	EE104
	3. Cream	EE105
	4. Yogurt/buttermilk	EE106
	5. Ice cream	EE107
	6. Cheese	EE108
	7. Raw egg (e.g. egg flip)	EE109
	8. Boiled or fried egg	EE110
	9. Fish/fish products	EE111
	10. Additives	EE112
	11. Wheat	EE113
	12. Nuts	EE114
	13. Soya	EE115
	14. Fruit, berries	EE116
	15. Vegetables/potatoes	EE117
	16. Chocolate	EE118
	17. Other sweets	EE119
	18. Sugar	EE120
	19. Other	EE121
	Other, specify _____	EE122 EE702 (txt.)
9	Are there any foods which you specifically avoid giving your child?	
	1-No 2-Yes	EE123
10	If yes, which foods do you try to avoid and how strict are you with your child's diet?	
	1. Milk	EE124
	2. Eggs	EE125
	3. Fish/fish products	EE126
	4. Meat/meat products	EE127
	5. Wheat	EE128
	6. Sugar	EE129
	7. Other	EE130
	Other, specify _____	EE131 EE703 (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 to survey the baby's food allergy and avoidance.

4. Revision during the data collection period:

No revisions have been made in the questions.

11-12. Nutrition: Dietary Supplement

1. Name of original questions: Questions related to baby's vitamins or other dietary supplement

Q	Response options	Variable name
11	Do you give your child cod liver oil, vitamins, iron or any other dietary supplement?	
		EE132
12	If yes, specify which product(s) and how often you give them to your child. How old was your child when you first started giving him/her the product?	
	<i>How often do you give your child this?</i>	<i>How old was your child when you started giving the product?</i>
	1-Daily 2-Sometimes	__ __ months Number 0-99
	1.Cod liver oil	EE133
	2.Biovit	EE135
	3.Sanasol	EE137
	4.Nycoplus Multi-Vitamin mixture for children	EE139
	5.Fluoride tablets	EE141
	6. Iron supplement	EE143
	Iron supplement, specify _____	EE145 EE704 (txt.)
	7. Other dietary supplement	EE146
	Other dietary supplement, specify ____	EE148 EE705 (txt.)
		EE147

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 baby's nutrition through intake of cod liver oil, vitamins and other dietary supplement.

4. Revision during the data collection period:

No revisions have been made in the questions.

Growth, health and illness

13-15. Vaccination

1. Name of original questions: Questions related to baby's vaccination

Q	Response options			Variable name	
13	How many times have you been to the mother and child health centre since his/her birth?				
		1) 0-4 2) 5-10 times 3) 11-15 times 4) 16 or more		EE149	
14	Do you want your child to be given the vaccinations that are recommended for children in Norway?				
		1) Yes, all the recommended vaccinations 2) Yes, some vaccinations 3) No, no vaccinations		EE150	
15	Indicate whether your child has had any vaccinations. If yes, how many times, and indicate if there have been any side effects requiring a doctor or hospital to be contacted.				
		Received the vaccination?	If yes, how many times?	Side-effect resulting in extra contact with a doctor?	Side-effect resulting in examination/hospital admission?
		1-No 2-Yes	1-1 2-2 3-3	1-No 2-Yes	1-No 2-Yes
	1.DTP(Diphtheria, tetanus, whooping cough)	EE776	EE151	EE152	EE153
	2.Hib (Haemophilus influenzae type b)	EE777	EE784	EE785	EE786
	3.Polio	EE778	EE956	EE957	EE958
	4.MMR(measles, mumps, rubella)	EE779	EE160	EE161	EE162
	5.DT (diphtheria, tetanus-sometimes given instead of DTP)	EE780	EE154	EE155	EE156
	6.Hepatitis B	EE781	EE163	EE164	EE165
	7. BCG (tuberculosis)	EE782	EE166	EE167	EE168
	8. Pneumococcus (Prevenar)	EE1008	EE1009	EE1010	EE1011
	9. Other vaccination	EE783	EE169	EE170	EE171
	Other vaccination, specify _____	EE172 EE706 (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 to survey the baby's vaccinations and their side effects.

4. Revision during the data collection period:

Some revisions have been made in question 15. The first two response columns were not included in version A.

16-18. Long-term Illnesses or Health Problems

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

Q	Response options/Variable name				
16	Does your child have or has he/she had any of the following health problems? If yes, has your child been referred for a specialist examination?				
	No	Yes, has now	Yes, has previously	<i>Has your child been referred for a specialist investigation?</i> 1-No 2-Yes	
	1. Dislocated hip (hip problem)	EE787	EE788	EE789	EE790
	2. Reduced hearing	EE791	EE792	EE793	EE794
	3. Impaired vision	EE795	EE796	EE797	EE798
	4. Delayed motor development (e.g. sits/walks late)	EE799	EE800	EE801	EE802
	5. Too little weight gain	EE803	EE804	EE805	EE806
	6. Too much weight gain	EE807	EE808	EE809	EE810
	7. Abnormal head circumference	EE811	EE812	EE813	EE814
	8. Heart defect	EE815	EE816	EE817	EE818
	9. Testicles not descended into scrotum	EE819	EE820	EE821	EE822
	10. Asthma	EE823	EE824	EE825	EE826
	11. Atopic eczema (childhood eczema)	EE827	EE828	EE829	EE830
	12. Urticaria (hives)	EE831	EE832	EE833	EE834
	13. Food allergy/intolerance	EE835	EE836	EE837	EE838
	14. Delayed or abnormal speech development	EE839	EE840	EE841	EE842
	15. Sleep problems	EE843	EE844	EE845	EE846
	16. Behavioural problems	EE847	EE848	EE849	EE850
	17. Social problems	EE967	EE968	EE969	EE970
	18. (Other) malformations	EE851	EE852	EE853	EE854
	Other malformations, specify _____	EE207 EE707 (txt.)			
	19. Other	EE856	EE857	EE858	EE859
	Other, specify _____	EE210 EE708 (txt.)			
17	If a specialist referral was made, what did this examination show?				
	1) Everything was fine 2) Still some doubts/further investigation needed 3) Has not been for any examination yet			EE211	
	Diagnosis 1			EE861	
	Diagnosis 1, describe: _____			EE212 EE709(txt.)	
	Diagnosis 2			EE862	
	Diagnosis 2, describe: _____			EE863 EE951(txt.)	
	Diagnosis 3			EE864	
	Diagnosis 3, describe: _____			EE865 EE952(txt.)	
18	Has your child been treated with a "cushion" for a hip problem?				
	1) No 2) Yes			EE213	
	If yes, how long? _____ months			EE214	

Question 16 corresponds to question 18 in version A, with 15 sub-questions and two response columns (see table below).

Q	Version A	Response options/Variable name	
18	Does your child have or has he/she had any of the following health problems? If yes, has your child been referred for a specialist examination?	<i>Has the problem?</i>	<i>Has your child been referred for a specialist investigation?</i>
		1-No 2-Yes	1-No 2-Yes
	1.Hips	EE 179	EE180
	2. Hearing	EE181	EE182
	3. Sight	EE183	EE184
	4. Delayed motor development(e.g. sits/walks late)	EE185	EE186
	5. Too little weight gain	EE187	EE188
	6. Too much weight gain	EE189	EE190
	7. Abnormal head circumference	EE191	EE192
	8. Heart defect	EE193	EE194
	9. Testicles not descended into scrotum	EE195	EE196
	10. Asthma	EE197	EE198
	11. Atopic eczema (childhood eczema)	EE199	EE200
	12. Urticaria (hives)	EE201	EE202
	13. Food allergy/intolerance	EE203	EE204
	14. (Other) malformations	EE205	EE206
	15. Other	EE208	EE209

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 assessing the presence of long-term illnesses and health problems of the baby at 18 months. 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:

Question 16 corresponds to question 18 in version A, with 15 sub-questions and two response columns (see tables above).

19. Acute illnesses or Health Problems

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

Q	Response options / Variable name					
		At 6-11 months		At 12-18 months		Has your child been admitted to hospital?
19	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.	1-No 2-Yes	Number of times	1-No 2-Yes	Number of times	1-No 2-Yes
	1.Common cold	EE215	EE216	EE217	EE218	EE219
	2a. Throat infection	EE220	EE221	EE222	EE223	EE224
	2b.Throat infection with confirmed streptococcal infection	EE971	EE972	EE973	EE974	EE975
	3. Other type of sore throat	EE976	EE977	EE978	EE979	EE980
	4.Ear infection	EE225	EE226	EE227	EE228	EE229
	5.Pseudocroup	EE230	EE231	EE232	EE233	EE234
	6.Bronchitis/RS virus/pneumonia	EE235	EE236	EE237	EE238	EE239
	7.Gastric flu/diarrhoea	EE240	EE241	EE242	EE243	EE244
	8.Urinary tract infection	EE245	EE246	EE247	EE248	EE249
	9.Conjunctivities	EE250	EE251	EE252	EE253	EE254
	10.Febrile convulsions	EE255	EE256	EE257	EE258	EE259
	11.Other convulsions (with any fever)	EE260	EE261	EE262	EE263	EE264
	12. Chickenpox	EE866	EE867	EE868	EE869	EE870
	13.Injury or accident	EE265	EE266	EE267	EE268	EE269
	14.Other	EE270	EE271	EE272	EE273	EE274
	Other, describe_____	EE275	EE710 (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 MoBa to survey the occurrence of illness or health problems of a more acute nature.

4. Revision during the data collection period:

Item 2a in versions A and B was replaced by 2b and 3 in versions C, D and E. Item 12 was used in all other versions except for version A.

20-22. Visits to Doctors or Admission to Hospitals

1. Name of original questions: Questions about baby's visits to doctors or admission to hospitals

Q	Response options / Variable name				
20	Has your child been to see the doctor or to the hospital between 6 and 11 months and/or 12 and 18 months? If yes, specify how many times.				
		<i>At 6-11 months</i>		<i>At 12-18 months</i>	
		1-No 2-Yes	Number of times	1-No 2-Yes	Number of times
	GP (excluding mother and baby health centre)	EE276	EE277	EE278	EE279
	Casualty doctor	EE280	EE281	EE282	EE283
	Private specialist	EE284	EE285	EE286	EE287
	Hospital outpatient clinic	EE288	EE289	EE290	EE291
	Admitted to hospital	EE292	EE293	EE294	EE295
21	Has your child been referred to any of the following services?				
	Habilitation service			EE871	
	Educational psychology service	1-No 2-Yes		EE872	
	Child psychiatric outpatient clinic/department			EE873	
22	If your child has been examined at or admitted to hospital, give the name of the hospital:				
	Hospital name 1: _____			EE296 EE711 (txt.)	
	Hospital name 2: _____			EE297 EE712 (txt.)	
	Hospital name 3: _____			EE298 EE713 (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 MoBa to survey the baby's visits to doctors, referral to a specialist and admission to hospitals, which can be used as an indicator of severity of illness.

4. Revision during the data collection period:

Question 21 was not included in version A.

23-25. Symptoms and Food Allergies since the Age of 6 months

1. Name of original questions: Questions about the baby's symptoms and food allergies since the age of 6 months

Q	Response options / Variable name					
23	Has your child had any of the following symptoms since the age of 6 months? If yes, at what age?					
		<i>Had symptoms?</i>	<i>If yes, at what age?</i>			
		1-No 2-Yes	6-8 mth	9-11 mth	12-14mth	15 mth or more
	1.Wheezing/whistling in the chest	EE299	EE300	EE301	EE302	EE303
	2.Tightness in the chest	EE304	EE305	EE306	EE307	EE308
	3.Coughing at night	EE309	EE310	EE311	EE312	EE313
	4.Running nose without a cold	EE314	EE315	EE316	EE317	EE318
	5.Constipation	EE319	EE320	EE321	EE322	EE323
	6.Diarrhoea	EE324	EE325	EE326	EE327	EE328
	7.Itchy rash that comes and goes	EE329	EE330	EE331	EE332	EE333
24	Has your child ever been tested for allergies?					
		1-No 2-Yes				EE334
25	If yes, what allergens were tested for and what was the result?					
		<i>Test for...?</i>	<i>Was the test positive?</i>			
			1-No 2-Yes 3-Don't know			
	1.Milk	EE335	EE336			
	2.Egg	EE337	EE338			
	3.Fish	EE339	EE340			
	4.Mould	EE341	EE342			
	5.Mites	EE343	EE344			
	6.Animals	EE345	EE346			
	7.Pollen	EE347	EE348			
	8. Other	EE349	EE350			
	Other, specify_____	EE351 EE714 (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 MoBa to survey the presence of symptoms and food allergies since the baby was 6 months old.

4. Revision during the data collection period:

No revisions have been made in the questions.

26-29. Medication

1. Name of original questions: Questions about children's use of medication

Q	Response options / Variable name					
26	Have you ever tried any kind of so-called alternative medicine on your child since he/she was 6 months old?					
		1-No 2-Yes Number 0-99			EE352 EE353	
27	If yes, how many times?					
	Alternative medicine 1.				EE354 EE715 (txt.)	
	Alternative medicine 2.				EE355 EE716 (txt.)	
	Alternative medicine 3.				EE356 EE717 (txt.)	
	Alternative medicine 4.				EE357 EE718 (txt.)	
	Alternative medicine 5.				EE358 EE715 (txt.)	
28	Has your child received any medication since the age of 6 months?					
		1-No 2-Yes			EE362	
29	If yes, give the name of the medication and what age your child was when he took it.					
		<i>Name of medicine</i>	<i>How old was your child when you gave the medicine?</i>			
			6-8 month	9-11 months	12-14 months	15-18 months
	Medicine 1.	EE363 EE720_K	EE364	EE365	EE366	EE367
	Medicine 2.	EE368 EE721_K	EE369	EE370	EE371	EE372
	Medicine 3.	EE373 EE722_K	EE374	EE375	EE376	EE377
	Medicine 4.	EE378 EE723_K	EE379	EE380	EE381	EE382
	Medicine 5.	EE981 EE1003_K	EE382	EE383	EE384	EE385

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:

No revisions have been made in the questions.

30. Length, Weight, and Head Circumferences

1. Name of original questions: Questions about children’s height, weight and head circumferences

Q	Response options / Variable name					
30	What were your child’s length, weight and head circumference when he/she was around 8 months, 1 year and the last time they were measured (15–18 months)?					
	<i>Date of measurement</i>			<i>Length</i>	<i>Head circumferences</i>	<i>Weight</i>
	Day	Month	Year	___cm	___cm	___g
	Around 8 months	Q5_A6E_8_M		EE387	EE388	EE386
	Around 1 year	Q5_A6E_1_Y		EE393	EE394	EE392
	15-18 months	Q5_A6E_15_18_M		EE399	N/A	EE398

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:

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. Additionally, BMI is an inexpensive and easy-to-perform method of screening for weight categories that may lead to health problems.

4. Revision during the data collection period:

No revisions have been made in the questions.

Development and behaviour

31-32. Child's Development

1. Name of original scale: Ages and Stages Questionnaires (ASQ) and one MoBa specific questions about unaided walk.

Q		Response options	Variable name
31a	How many months old was your child when he/she took his/he first steps unaided?		
Version A & B	__ months		EE400
	Still not walking unaided		EE401
31b	Can your child walk unaided?		
Version C, D, E		1-No 2-Yes	EE986
	If yes, how old was your child when he/she could first walk unaided?	__ months	EE987
32	The following questions concern your child's development. If you haven't actually observed your child, spend a little time looking at what he/she can actually do.		
Only in version A&B	1a. When your child wants something, does he/she tell you by pointing to the object?		EE402
In ALL versions	1b. When you ask him/her, does your child go into another room to find a familiar toy or object? (You might ask, "Where is your ball?", or say, "Bring me your coat" or "Go get your blanket").		EE403
	2. Does your child say eight or more words in addition to "mama" and "Dada"?		EE404
	3. Without showing him/her first, does your child point to the correct picture when you say, "Show me the kitty" or ask, "Where is the dog"?		EE405
	4. Does your child move around by walking, rather than by crawling on his/her hands and knees?	1-Yes, often	EE406
	5. Can your child walk well and seldom fall?	2-Sometimes	EE407
	6. Does your child walk down stairs if you hold onto one of his/her hands?		EE408
	7. Does your child throw a small ball or toy with a forward arm motion? (If he/she simply drops the ball, enter a cross under "Not yet")	3-Not yet	EE409
	8. Does your child stack a small block or toy on top of another one? (For example, small boxes or toys about 3 cm in size)		EE410
	9. Does your child turn the pages of a book by himself/herself? (He/she may turn more than one page at a time.)		EE411
	10. Does your child play with a doll or stuffed animal by hugging it?		EE412
	11. Does your child try to get your attention show you something by pulling your hand or clothes?		EE413
	12. Does your child come to you when he/she needs help, such as with opening a box?		EE414
	13. Does your child copy the activities you do, such as wipe up a spill, sweep, shave, or comb hair?		EE415

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% (Squires, et al., 1999). 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 manual supplement 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 edition). 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.

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:

Item 31a was included only in versions A and B; in versions C, D, and E, item 32 was used (It should be noted that one has to recode the variables in order to utilize the whole dataset). Item 32-1a was only included in versions A and B; it was removed in versions C, D, & E.

33. Non-verbal Communication

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

Q		Response options	Variable name
33	More about your child's development.		
	1. Does your child use sounds or words together with gestures (for example, uses sounds when pointing or reaching towards toys or objects)?	1-Yes, usually	EE874
	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?	2-Rarely	EE875
	3. 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?	3- Not yet	EE876
	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)?		EE988

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

The Non-Verbal Communication Checklist (Schjolberg, 2003; 2005) is 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 (sample, reliability, validity):

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, 2005). Cronbach's alphas for the 4 items are .49 and .70 respectively in MoBa Q5 and Q6.

Base References/Primary Citations:

Schjolberg, S. (2003). Early Identification of Autism Spectrum Disorders. Paper presented at conference the Social Brain. Gøteborg, Sweden.

Schjolberg, S. (2005). Test retest reliability of a screening checklist for Autism Spectrum disorders in young children. Paper presented at International Meeting for Autism Research. Boston, Massachusetts.

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 or ESAT.

4. Revision during the data collection period:

The four questions were used in versions C, D, and E. Only the first three questions were used in version B; none of the questions were included in version A.

34. Temperament

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

Q		Response options	Variable name
34	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	EE416
	2. Your child is always on the go		EE417
	3. Your child prefers playing with others rather than alone		EE418
	4. Your child is off and running as soon as he/she wakes up in the morning	2- Quite typical	EE419
	5. Your child is very sociable		EE420
	6. Your child takes a long time to warm up to strangers	3- Neither/nor	EE421
	7. Your child gets upset or sad easily		EE422
	8. Your child prefers quiet, inactive games to more active ones	4-Not so typical	EE423
	9. Your child likes to be with people		EE424
	10. Your child reacts intensely when upset	5-Not at all typical	EE425
	11. Your child is very friendly with strangers		EE426
	12. Your child complains that certain garments are too tight		EE877
	13. Your child becomes distressed by having his/her face or hair washed		EE878

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:

Items 12&13 were not included in version A.



35/36. Autistic Traits: ESAT

NB! Both ESAT and M-CHAT are screening instruments for autistic traits, and need to be looked 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.

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

Q				Response options	Variable name
35/36	A	B	C D E	About your child's behavior. 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".	
		X	X	ESAT-1. Is your child interested in different sorts of toys or objects, and not for instance mainly in cars or buttons?	EE886
	X	X	X	ESAT-2. Can your child play with toys in varied ways (not just fiddling, mouthing or dropping them)?	EE433
		X		ESAT-3. When your child expresses his/her feelings, for instance by crying or smiling, is that mostly in expected and appropriate moments?	EE887
	X	X		ESAT-4. Does your child react in a normal way to sensory stimulation, such as coldness, warmth, light, pain or tickling?	EE888
	X	X		ESAT-5. Can you easily tell from the face of your child how he/she feels?	EE889
		X		ESAT-6. Is it easy to make eye-contact with your child?	EE890
	X	X		ESAT-7. When your child has been left alone for some time, does he/she try to attract your attention, for instance by crying or calling?	EE891
	X	X		ESAT-8. Is the behaviour of your child free of stereotyped repetitive movements like banging his/her head or rocking his/her body?	EE892
	X			ESAT-9. Does your child, on his/her own accord, ever bring objects over to you or show you something?	EE893
	X			ESAT-10. Does your child show to be interested in other children or adults?	EE894
	X	X		ESAT-11. Does your child like to be cuddled?	EE895
	X			ESAT-12. Does your child ever smile at you or at other people?	EE896
	X			ESAT-13. Does your child like playing games with others, such as peek-a-boo, ride on someone's knee, or to be swung?	EE960
	X	X		ESAT-14. Does your child react when spoken to, for instance, by looking, listening, smiling, speaking or babbling?	EE897

*Items selected into Q5 differ in different versions. In the table above, a cross (X) is used to mark the selected items. The number appears in the order as used in the original ESAT scale.

3 items from section 35 were selected from other scales than the ESAT.

Q			Response options	Variable name
35	About your child's behavior. 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".			
SCQ-Social communication questionnaire	10.	Does your child ever try to comfort you if you are sad or hurt?	1- Yes 2- No	EE898
	11.	Has your child ever had things that he/she seemed to do in a very particular way or order, or rituals that he/she has to have you to do?		EE884
Communication and Symbolic Behaviour Scales	12.	Does your child ever do things to get you to laugh?		EE885

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). Items 10 & 11 in section 35 are from Autism Screening Questionnaire (Later renamed to

Social communication questionnaire; Berument, et al., 1999; Howlin & Karpf, 2004). Item 12 is from Communication and Symbolic Behaviour Scales (CSBS; Wetherby & Prizant, 2001).

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 4-item questionnaire administered by physicians. A psychologist using the 14-item ESAT then evaluated children who screened positive in their homes. Children who failed 3 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:

Berument S.K, Rutter M., Lord C, Pickles A, & Bailey A. 1999. Autism screening questionnaire: diagnostic validity. *British Journal of Psychiatry* 175: 444-451.

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.

Howlin P, & Karpf J. 2004. Using the social communication questionnaire to identify ‘autistic spectrum’ disorders associated with genetic conditions. *Autism* 8 (2): 175-182.

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.

Wetherby, A. & Prizant, B. 2001. *Communication and Symbolic Behavior Scales Developmental Profile- Preliminary Normed Edition*. Baltimore, MD: Paul H. Brookes.

Modifications:

Some modifications have been made on item ESAT-8 in version B of Q5. English translation of item ESAT-8 in version B: Does your child ever show a peculiar way of behaving that is constantly repeated like banging his/her head or rocking back and forth? Original English for item 8: Is the behaviour of your child without stereotyped repetitive movements like banging his/her head or rocking his/her whole body? The original item from the ESAT is used in later versions of the questionnaire.

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:

Items selected into Q5 differ in different versions (see table above for details).

35/36. Autistic Traits: M-CHAT

NB! Both ESAT and M-CHAT are screening instruments for autistic traits, and need to be looked 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.

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

Q				Response options	Variable name
35/36	A	B	C D E	More about your child's behavior. 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".	
	X		X	1. Does your child enjoy being swung, bounced on your knee, etc.?	EE427/EE1005
	X	X	X	2. Does your child take an interest in other children?	EE434
	X	X	X	3. Does your child like climbing on things, such as up stairs?	EE429
	X		X	4. Does your child enjoy playing peek-a-boo/hide-and-seek?	EE430
	X	X	X	5. Does your child ever pretend, for example, to talk on the phone or take care of dolls, or pretend other things?	EE431
			X	6. Does your child ever use his/her index finger to point, to ask for something?	EE998
	X	X	X	7. Does your child ever use his/her index finger to point, to indicate interest in something?	EE432/997
	X	X	X	8. Can your child play properly with small toys (e.g. cars or bricks) without just mouthing, fiddling, or dropping them?	EE433
	X	X	X	9. Does your child ever bring objects over to you to show you something?	EE428
			X	10. Does your child look you in the eye for more than a second or two?	EE1006
		X	X	11. Does your child ever seem oversensitive to noise? (e.g., plugging ears)	EE900
			X	12. Does your child smile in response to your face or your smile?	EE1000
		X	X	13. Does your child imitate you? (e.g., you make a face-will your child imitate it?)	EE879
		X	X	14. Does your child respond to his/her name when you call?	EE901
		X	X	15. If you point at a toy across the room, does your child look at it?	EE882
			X	16. Does your child walk?*	EE986/406
			X	17. Does your child look at things you are looking at?	EE1001
		X	X	18. Does your child make unusual finger movements near his/her face?	EE 880
		X	X	19. Does your child try to attract your attention to his/her own activity?	EE881
			X	20. Have you ever wondered if your child is deaf?	EE1002
		X	X	21. Does your child understand what people say?	EE899
		X	X	22. Does your child sometimes stare at nothing or wander with no purpose?	EE833
		X	X	23. Does your child look at your face to check your reaction when faced with something unfamiliar?	EE902

2. Description of original instrument: The 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 2, 7, 9, 13, 14 & 15) 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). The format and the first 9 items are directly taken from the CHAT.

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:

Robins D L, Fein D, Barton M L, & 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.

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.

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:

In Q5, the entire checklist was used in versions C, D and E; only selective items were used in version A and B of Q5.

37. Child Behaviour CheckList (CBCL)

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

Q	Response options	Variable name
37	To what extent are the following statements true of your child's behaviour during the last two months?	
1. Can't concentrate, can't pay attention for long	1-Not true 2-Somewhat or sometimes true 3-Very true or often true	EE435
2. Quickly shifts from one activity to another		EE961
3. Can't sit still, restless or overactive		EE903
4. Gets into everything		EE904
5. Is mostly happy and contented		EE905
6. Clings to adults or too dependent		EE438
7. Gets too upset when separated from parents		EE439
8. Gets in many fights		EE962
9. Hits others		EE442
10. Defiant		EE446
11. Doesn't seem to feel guilty after misbehaving		EE447
12. Punishment doesn't change his/her behavior		EE448
13. Doesn't eat well		EE963
14. Likes almost every kind of food		EE964
15. Resists going to bed at night		EE906
16. Doesn't want to sleep alone		EE440
17. Afraid to try new things		EE907
18. Disturbed by any change in routine		EE908
19. Too fearful or anxious		EE909

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 .53 for Q5.

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 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 11 (English: Doesn't seem to feel guilty after misbehaving; Norwegian: Det merkes ikke på barnet når hun/han har gjort noe galt) and 12 (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:

While there are only 8 items (namely, item 1, 6, 7, 9, 10, 11, 12, &16; cf. the table above) from the CBCL in version A, there are 11 additional items in the other versions.



38-39. Sleep

1. Name of original questions: 2 questions about the child's sleep

Q	Response options	Variable name
38	How often does your child usually wake during the night?	
	1) 3 or more times every night 2) Once or twice every night 3) A few times a week 4) Seldom or never	EE453
39	How many hours in total does your child sleep in 24hrs?	
	1) 10 hours or less 2) 11-12 hours 3) 13-14 hours 4) 15 hours or more	EE454

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 child's sleep patterns in the last 6 months.

4. Revision during the data collection period:

No revisions have been made in the questions.

40. Maternal Concerns

1. Name of original questions: 5 questions about maternal concerns of their children's development

Q	Response options	Variable name
40	About your worries	
	1. Are you worried about your child's physical development?	EE910
	2. Are you worried about your child's behaviour?	EE911
	3. Are you worried because your child is demanding and difficult to cope with?	EE912
	4a. Have you ever wondered that your child is deaf?	EE913
	4b. Are you worried because your child is so uninterested in other children?	EE1007
	5. Have you any other worries with regard to your child's health?	EE914
	If you have, specify _____	EE915 EE953 (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:

Question 40 was not used in version A. Item 4a in version B was replaced with item 4b in versions C, D, and E; 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 daily routine

41-43. Day Care Solution

1. Name of original questions: About the child's day care solutions

Q	Response options			Variable name	
41	Where has your child been cared for during the day? Enter a cross for the various age groups.				
		<i>At home with his/her mother / father</i>	<i>At home with unqualified childminder</i>	<i>At home with a childminder/in an family crèche nursery</i>	<i>In a nursery</i>
	1. 0-6 months	EE466	EE467	EE468	EE469
	2. 7-9 months	EE470	EE471	EE472	EE473
	3. 10-12 months	EE474	EE475	EE476	EE477
	4. 13-15 months	EE478	EE479	EE480	EE481
	5. 16-18 months	EE482	EE483	EE484	EE485
42	How many hours a week is your child looked after in the current childcare scheme (other than by his/her mother and father)?				
	_____ hours	Number 0-99		EE486	
43	How many children in total are looked after in this childcare scheme (if day-care centre, how many in the department)?				
		Number 0-99		EE487	

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:

No revisions have been made in the questions.

Added reference:

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

44-45. Living with the Child's 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 his/her father.

Q	Response options	Variable name
44	Do you and your child live with your child's father?	
	1-No 2-Yes	EE488
45	If your child does not live with his/her father, how much time does your child spend with him?	
	1-At least half the time 2-At least once a week 3-At least once a month 4-Less often than once a month 5-Never	EE489

- 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 Paediatrica* 97 (2):153-158.

46-50. Living Situations

1. Name of original questions: Questions about living situations

Q	Response options	Variable name
46	How many times have you moved house since your child was born?	
	Number 0-99	EE490
47	Roughly how many square metres is the living area where you currently live?	
	Number 0-999	EE491
48	Do you have heating based on electrical heating cables under the floor in rooms where you child is?	
	1-No 2-Yes	EE916
49	If yes, in which rooms?	
	Living room	EE917
	kitchen	EE918
	Child's room	EE919
	Bedroom	EE920
	Hall	EE921
	Bathroom	EE922
	Other rooms	EE923
50	Has there been any damage caused by damp, any visible fungal/mould growth or mouldy smell in your home during the last year?	
	No	EE492
	Yes, damage caused by damp	EE493
	Yes, visible fungal mould growth	EE494
	Yes, mouldy smell	EE495

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 child's living situations.

4. Revision during the data collection period:

No revisions have been made in the questions.

51-55. Living Environments

1. Name of original questions: Questions about the baby's living environments

Q		Response options	Variable name
51	What type of drinking water do you have where you live?		
	Water from a public or private water company		EE496
	Water from your own water supply (e.g. own well)		EE497
	Don't know		EE498
52	Do you live close to high-voltage lines?		
		1-No 2-Yes, closer than 50 meters 3-Yes, 50-100 meters away 4-Yes, but more than 100 meters away	EE499
53	Are there pets where your child live?		
Version A		1-No 2-Yes	EE500
53	Are there pets where your child lives or at the childminder's?		
Version B,C,D,E	No		EE947
	Yes, at home		EE948
	Yes, at the childminder's		EE949
54	If yes, which kind of pets?		
	1. Dog		EE501
	2. Cat		EE502
	3. Guinea pig/rabbit/hamster/ rat, etc.		EE503
	4. Budgie or other type of birds		EE504
	5. Other type of animals		EE505
	Other type of animals, specify ____		EE506 EE724 (txt.)
55	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	EE507
	If yes, how many hours a day?	Number 0-99	EE508

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 baby's living environments, including drinking water, distance to high-voltage lines, pets, and exposure to smoking.

4. Revision during the data collection period:

Some revisions in question 53 from version A to the other versions (see the table above).

56-58. First Tooth and Brushing Teeth

1. Name of original questions: 3 questions about teeth and brushing teeth

Q		Response options	Variable name
56	How many months old was your child when he/she got his/her first tooth?		
		Number 0-99	EE1012
		Don't know	EE1013
57	How often does your child have his/her teeth brushed?		
		1-Twice a day or more 2-Once a day 3-Sometimes 4-Never	EE509
58	Do you use fluoride toothpaste when brushing your child's teeth?		
		1-No 2-Sometimes 3-Yes, usually	EE510

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 age when the children get their first tooth, and evaluate children's tooth health habits.

4. Revision during the data collection period:

Question 56 was included only in versions D and E, but not in A, B or C.

59-62. Time outside Home and in front of TV/Video

1. Name of original questions: Questions about the time the baby spent outside home and in front of TV, and whether the baby has been to swimming classes for babies. The last question is whether or not the baby uses a pacifier at 18 months.

Q		Response options	Variable name
59	How often is your child outside at the moment?		
		1)Seldom 2)Often, but less than one hour a day on average 3) 1-3 hours a day on average 4)More than 3 hours a day	EE959
60	How many hours on average does your child sit in front of a TV/video every day?		
		1) 4 hours 2) 3 hours 3) 1-2 hours 4) Less than 1 hour 5) Seldom/never	EE512
61	Does your child go to or has been to swimming classes for babies?		
		1-No 2- Yes	EE513
	If yes, how long has your child been going?	___ months	EE514
62	Does your child use a dummy/pacifier now at 18 months?		
		1)Seldom or never 2)Only when he/she goes to sleep 3) Quite often 4)Most of the time	EE515

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 to estimate how much time children spend outside and in front of TV/video. Time spent outside is found to correlate with physical activity, and also negatively correlated with obesity, whereas hours of TV 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:

Question 59 was not included in version A. No further 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 Paediatrica* 97 (7): 9777-9982.

About yourself

63-68. Health, Illness and Use of Dietary Supplements

1. Name of original questions: About the mother's civil status, pregnancy status, illness, admission to hospitals and use of dietary supplements

Q	Response options	Variable name
63	What is your civil status at the moment?	
	1-Married 2-Cohabiting 3-Single 4-Divorced/separated 5-Widowed 6-Other	EE520
64	Are you pregnant at the moment?	
	1-No 2-Yes	EE521
	If yes, how many weeks?	EE522
65	Are you suffering from a long-term illness that has started during the last 12 months?	
	1-No 2-Yes	EE523
	If yes, specify _____	EE524 EE725 (txt.)
66	Have you yourself been admitted to hospital during the last 12 months?	
	1-No 2-Yes	EE525
	If yes, which hospital?	EE526 EE726 (txt.)
67	Are you taking at the moment any cod liver oil, vitamins or other dietary supplements?	
	1-No 2-Yes	EE527
	1.	EE528 EE727 (txt.)
	2.	EE529 EE728 (txt.)
	3.	EE530 EE729 (txt.)
	4.	EE531 EE730 (txt.)
	If yes, specify _____	

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 mother's civil status, health and illness when the baby was at 18 months old.

4. Revision during the data collection period:

No revisions have been made in the questions.

69-71. Eating Disorders

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

Q		Response options	Variable name	
69	Have you during the last 6 months or at any time previously:		Last 6 mth	Previously
	Thought yourself that you were too fat?	1-Yes 2-Perhaps 3-No	EE925	EE926
	Been really afraid of putting on weight or becoming too fat?		EE927	EE928
	Heard others say that you were too thin, while you yourself thought that you were too fat?		EE929	EE930
	Thought that it was extremely important for your self-image to maintain a particular weight?		EE931	EE932
70	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	EE933	EE934
	Used vomiting to control your weight?		EE935	EE936
	Used laxatives to control your weight?		EE937	EE938
	Used fasting to control your weight?		EE939	EE940
	Used hard physical exercise to control you weight?		EE941	EE942
71	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	EE943	

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 Scandinavica* 108(3):196-202.

4. Revision during the data collection period:

The questions were used in all versions of the questionnaire except for version A.

72-77. Bodily Pain

1. Name of original questions: Questions about bodily pain

Q	Response options	Variable name
72	Have you experienced pain during the last 12 months in any of the following places?	
1. Stomach	1-Seldom/never 2-Slight pain 3-Some pain 4-Major pain	EE532
2. Arms/legs		EE533
3. Neck/shoulders		EE534
4. Head		EE535
5. Back		EE536
6. Pelvis (pelvic girdle pains)		EE537
73	Have you experienced any pain in your back or pelvis during the last 12 months. Enter a cross to indicate how much pain you have felt in different places:	
1. In the small of the back	1- Some pain 2- Major pain	EE538
2. One of the pelvic/sacroiliac joints at the back		EE539
3. Both pelvic/sacroiliac joints at the back		EE540
4. Over the coccygeal bone		EE541
5. In the buttocks		EE542
6. Over the public bone		EE543
7. Groin		EE544
8. Other back pains		EE545
9. Other pains		EE546
74	Currently, do you wake during the night because of pelvic pain?	
	1-No, never 2-Yes, but seldom 3-Yes, often	EE547
75	Do you have such problems walking at the moment because of pelvic pains that you have to use a stick or crutches?	
	1-No, never 2-Yes, but not every day- the pain varies from day to day 3-Yes, must use a stick or crutches every day	EE548
76	Did you receive any treatment for pelvic pain after your last birth?	
	1-No 2-Yes	EE549
77	If yes, what type of treatment did you receive?	
Physiotherapy		EE550
Chiropractic		EE551
Medication		EE552
Other		EE553
Other, specify ____		EE554 EE731 (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 MoBa to survey the presence of bodily pain in the mother, along with its frequency, severity, and treatment.

4. Revision during the data collection period:

No revisions have been made in the questions.

78. Incontinence

1. Name of original questions: Questions about incontinence 18 months after the birth

Q	Versions A,B,C & D	Response options / Variable name	
78	Do you have any of the following problems at the moment?		
	<i>Problems</i>	<i>How often do you have problems?</i> 1) Never 2) 1-4 times a month 3) 1-6 times a week 4) Once a day 5) More than once a day	<i>How much at a time?</i> 1-Drops 2-Large amounts
	Incontinence when coughing, sneezing or laughing	EE555	EE556
	Incontinence during physical activity (running/jumping)	EE557	EE558
	Incontinence with a strong need to urinate	EE559	EE560
	Problems with retaining faeces	EE561	
	Problems with flatulence	EE562	N/A

In version E, the questions are formulated as below. (Due to the extra questions in version 5E the question numbers are 3 more from question 79 in this version, i.e. Q79 in 5D= Q82 in 5E, etc.)

Q	Version E	Response options	Variable name
78	Do you experience an escape of urine in connection with coughing, sneezing, laughter or heavy lifts at present?		
		1-Yes 2-No	EE1021
79	Do you experience an escape of urine in connection with sudden and strong urinary urgency at present?		
		1-Yes 2-No	EE1022
80	How often have you had problem?		
		1-Never 2-Less than once a month 3-Once or more a month 4-Once or more a week 5-Every day and/or every night	EE1023
81	How much urine escapes usually each time at present?		
		1-Never happens 2-Drops or less 3-Small amounts 4-Large amounts	EE1024

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 presence of incontinence, problems with retaining faeces and problems with flatulence in the mother when the baby was 18 months old.

4. Revision during the data collection period:

The questions in version E are formulated differently from those in the other versions (see tables above).

79-80. Medication

1. Name of original questions: About the mother's use of medicines

Q	Response options / Variable name	
79	Do you regularly take medication?	
	1-No 2-Yes	EE563
80	If yes, give the name of the medicines and how often you take them.	
	Name of medicine	<i>How often do you take them?</i> 1-Every day 2-Every day for certain periods 3-Sometimes
1.	EE564 EE732_K	EE565
2.	EE566 EE733_K	EE567
3.	EE568 EE734_K	EE569
4.	EE570 EE735_K	EE571

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:

The use of medication is considered an important proxy for possible disease, and is relevant to consider effects and prevalence of use.

4. Revision during the data collection period:

No revisions have been made in the questions.

Finances - lifestyle

81-84. Parental Leave and Sick Leave

1. Name of original questions: Questions about parental leave and sick leave

Q	Response options	Variable name	
81	How much leave did you and the child's father take after the birth?	Months <i>or</i>	Weeks
	You	EE572	EE573
	Child's father	EE574	EE575
82	Are you in paid employment?		
	1- No 2- Yes	EE576	
83	If so, how many hours do your work a week?		
	Number 0-999	EE577	
84	If you are in paid employment, have you taken any time off sick since you went back to work? If yes, specify how many days you were off sick.	<i>Sick leave?</i>	<i>No. of days</i>
	No	EE578	n/a
	Yes, due to own illness	EE579	EE580
	Yes, due to child being ill	EE581	EE582

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:

The questions were developed to survey how much parental leave the mother and the father respectively took, how long the mother took sick leave and the reasons for it.

4. Revision during the data collection period:

No revisions have been made in the questions.

85-86. Financial Situations

1. Name of original questions: Questions about the family's financial situations

Q	Response options	Variable name
85	Would your current financial situation allow you to cope with an unexpected bill of NOK 3,000 for a dental visit or a repair, for instance?	
	1-No 2-Yes 3-Don't know	EE583
86	Have you found it difficult sometimes during the last six months to cope with running expenses for food, transport, rent, etc.?	
	1-Never 2-Yes, but infrequently 3-Yes, sometimes 4-Yes, often	EE584

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:

The questions were developed to measure the family's financial situations.

4. Revision during the data collection period:

No revisions have been made in the questions.

87-88. Physical Activity

1. Name of original questions: Questions about physical activities

Q		Response options	Variable name
87	How often at the moment are you so physically active in your spare time and/or at work that you get out of breath or sweat?		
	Spare time	1) Never 2) Less than once a week 3) Once a week	EE585
	At work	4) Twice a week 5) 3-4 times or more a week 6) 5 times a week or more	EE586
88	How often are you physically active at present?		
	1. Walking	1) Never 2) 1-3 times a month 3) Once a week 4) Twice a week 5) 3 times or more a week	EE590
	2. Brisk walking		EE591
	3. Running/jogging/orienteering		EE592
	4. Cycling		EE593
	5. Training studio/weight training		EE594
	6. Aerobics/gymnastics/dance without running and jumping		EE595
	7. Aerobics/gymnastics with running and jumping		EE596
	8. Dancing (swing/rock/folk)		EE597
	9. Skiing		EE598
	10. Ball sports		EE599
	11. Swimming		EE600
	12. Riding		EE601
	13. Other		EE602

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:

The questions were developed for MoBa to survey the mother's physical activities when the baby was 18 months old.

4. Revision during the data collection period:

No revisions have been made in the questions.

89-91. Smoking and Drinking Habits

1. Name of original questions: Questions about the couples' smoking habits and the mother's alcohol consumption when the baby was 18 months old

Q		Response options	Variable name	
89	How much leave did you and the child's father take after the birth?		You	Your partner /husband
	If very day, number of cigarettes per day	1-Don't smoke 2-Smoke sometimes 3-Smoke every day Number 0-99	EE603	EE605
			EE604	EE606
90	How often do you consume alcohol at the moment?			
		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 often than once a month 7- Never	EE607	
91	How many units do you usually drink when you consume alcohol? (Enter a cross for both weekends and weekdays).			
	Weekend	1)10 or more 2) 7-9	EE608	
	Weekdays	3) 5-6 4) 3-4 5) 1-2 6) Less than 1	EE609	

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:

The questions were developed to measure the couples' intake nicotine and the mother's intake of alcohol.

4. Revision during the data collection period:

No revisions have been made in the questions.

A little more about yourself and how you are keeping now

92. Partnership Satisfaction

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

Q	Response options	Variable name
92	If you have a husband/boyfriend/partner, to what extent do you agree with the following descriptions?	
1. I have a close relationship with my spouse/partner		EE610
2. My partner and I have problems in our relationship	1-Agree completely	EE611
3. I am very happy with our relationship	2-Agree	EE612
4. My partner is generally understanding	3-Agree somewhat	EE613
5. I often consider ending our relationship	4-Disagree somewhat	EE614
6. I am satisfied with my relationship with my partner	5-Disagree	EE615
7. We frequently disagree on important decisions	6-Disagree completely	EE616
8. I have been lucky in my choice of a partner		EE617
9. We agree on how our child should be raised		EE618
10. I believe my partner is satisfied with our relationship		EE619

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 (Dyrdal 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.

Dyrdal, 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.

93-95. Social Support

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

Q	Response options	Variable name
93	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	EE620
94	How often do you meet 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	EE621
95	Do you often feel lonely?	
	1-Almost never 2-Infrequently 3-Sometimes 4-Usually 5-Almost always	EE622

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:

No 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.

96. The General Self-Efficacy Scale (GSE)

1. Name of original scale: The General Self-Efficacy Scale (GSE)

Q		Response options	Variable name
96	How well do these statements describe you?		
	1. I can always manage to solve difficult problems if I try hard enough		EE623
	2. If someone opposes me, I can find the means and ways to get what I want	1-Not at all true 2-Hardly true	EE624
	3. I am confident that I could deal efficiently with unexpected events	3-Moderately true	EE625
	4. I can remain calm when facing difficulties because I can rely on my coping abilities	4-Exactly true	EE626
	5. If I am in trouble, I can think of a good solution		EE627

2. Description of original instrument: The General Self-Efficacy scale (GSE)

The General Self-Efficacy scale is a 10-item psychometric scale that is designed to assess optimistic self-beliefs to cope with a variety of difficult demands in life. The scale has been originally developed in German by Matthias Jerusalem and Ralf Schwarzer in 1979, and later revised and adapted to many other languages by various co-authors (e.g Schwarzer et al., 1997; Leganger, et al., 2000). A 5-item short version (Tambs & Røysamb, 2014) is used in MoBa. Responses were reported on a 4-point scale ranging from (1) = Not at all true, to (4) = Exactly true.

Psychometric Information:

In samples from 25 nations, Cronbach's alphas ranged from .75 to .91, with the majority in the high .80s. The scale is unidimensional (Scholz, et al., 2002). Criterion-related validity is documented in numerous correlation studies (Schwarzer & Born, 1997; Scholz, et al., 2002), where positive coefficients were found with favorable emotions, and negative coefficients were found with depression, anxiety, stress, burnout, and health complaints. The construct validity of GSE was also supported in a Norwegian study (Leganger, et al., 2000). The 5 items in the short version were chosen after regression analyses based on a sample of N>1500. The short version had alpha of .78, and correlated .96 with the full scale (multiple $R^2=.92$). Internal consistency of the short version based on the MoBa data was alpha=.83 (Ystrom, et al., 2008)

Base References/Primary Citations:

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

Leganger, A., Kraft, P. & Røysamb, E. 2000. Perceived self-efficacy in health behaviour research: conceptualisation, measurement and correlates. *Psychology and Health* 15: 51-69.

Scholz, U., Gutiérrez-Doña, B., Sud, S., & Schwarzer, R. 2002. Is general self-efficacy a universal construct? Psychometric findings from 25 countries. *European Journal of Psychological Assessment* 18(3): 242-251.

Schwarzer, R., & Born, A. 1997. Optimistic self-beliefs: Assessment of general perceived self-efficacy in thirteen cultures. *World Psychology*, 3(1-2): 177-190.

Schwarzer, R., Born, A., Iwawaki, S., Lee, Y.-M., Saito, E., & Yue, X. 1997. The assessment of optimistic self-beliefs: Comparison of the Chinese, Indonesian, Japanese and Korean versions of the General Self-Efficacy Scale. *Psychologia: An International Journal of Psychology in the Orient* 40 (1): 1-13.

Ystrom E, Niegel S, Klepp K-I, Vollrath ME. 2008. The impact of maternal negative affectivity and self-efficacy on breastfeeding: The Norwegian Mother and Child Cohort Study (MoBa). *The Journal of Paediatrics* 152(1):68-72.

3. Rationale for choosing the questions:

Self-efficacy is considered to be an important determinant of behavioural change. The GSE has been used internationally with success for two decades, and is suitable for a broad range of applications.

4. Revision during the data collection period:

No revisions have been made in the questions.

97. Emotion: Enjoyment and Anger

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

Q		Response options	Variable name
97	In your daily life, how often do you experience the following?		
	1. Feel glad about something	1-Rarely or never	EE628
	2. Feel happy	2-Hardly ever	EE629
	3. Feel joyful, like everything is going your way, everything is rosy	3-Sometimes	EE630
	4. Feel like screaming at somebody or banging on something	4-Often	EE631
	5. Feel angry, irritated, annoyed	5-Very often	EE632
	6. Feel mad at somebody		EE633

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. Blumberg & 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, C.E., Libero, D.Z., 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 made in the questions.

98. The Rosenberg Self-Esteem Scale

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

Q		Response options	Variable name
98	How do you feel about yourself?		
	1. I have a positive attitude toward myself	1-Agree completely	EE634
	2. I feel completely useless at times	2-Agree	EE635
	3. I feel that I do not have much to be proud about	3-Disagree	EE636
	4. I feel that I am a valuable person, as good as anyone else	4-Disagree completely	EE637

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 (Ystgyrd, 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. Sørgyrd. *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.

Ystgyrd, 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.

99. Depression/Anxiety

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

Q		Response options	Variable name
99	Have you been bothered by any of the following during the last two weeks?		
	1. Feeling fearful		EE638
	2. Nervousness or shakiness inside		EE639
	3. Feeling hopeless about the future		EE640
	4. Feeling blue	1-Not bothered	EE641
	5. Worrying too much about things	2-A little bothered	EE642
	6. Feeling everything is an effort	3-Quite bothered	EE643
	7. Feeling tense or keyed up	4-Very bothered	EE644
	8. Suddenly scared for no reason		EE645

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 Scandinavica*, 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 in the questions.
- 

100. Adverse Life Events

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

Q	Response options & variable name	
100	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	<i>If yes:</i> 1-Not too bad 2-Painful/difficult 3-Very painful/difficult
	1. Have you had problems at work or where you study?	EE649 EE650
	2. Have you had financial problems?	EE651 EE652
	3. Have you been divorced, separated or ended the relationship with your partner?	EE653 EE654
	4. Have you had any problems or conflicts with your family, friends or neighbors?	EE655 EE656
	5. Have you been seriously worried that there is something wrong with your child?	EE657 EE658
	6. Have you been seriously ill or injured?	EE659 EE660
	7. Has anyone close to you been seriously ill or injured?	EE661 EE662
	8. Have you been involved in a serious traffic accident, house fire or robbery?	EE663 EE664
	9. Have you lost someone close to you?	EE665 EE666
	10. Have you been pressurized into having sexual intercourse?	EE667 EE668
	11. Other	EE669 EE670

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 new mother and the baby.

4. Revision during the data collection period:

No revisions have been made in the questions.

101-107. World Health Organization's Quality of Life Instrument

1. Name of original scale: World Health Organization's Quality of Life instrument-short version (the WHOQOL-BREF)

Q		Response options	Variable name
101	How would you rate your quality of life?		
		1-Very poor 2-Poor 3-Neither poor nor good 4-Good 5-Very good	EE671
102	How satisfied are you with your health?		
		1-Very dissatisfied 2-Dissatisfied 3-Neither satisfied nor dissatisfied 4-Satisfied 5-Very satisfied	EE672
103	The following questions ask about how much you have experienced certain things in the last two weeks.		
	1. To what extent do you feel that (physical) pain prevents you from doing what you need to do?		EE673
	2. How much do you need medical treatment to be able to function in your daily life?	1-Not at all 2-A little	EE674
	3. How much do you enjoy life?	3-A moderate amount	EE675
	4. To what extent do you feel your life to be meaningful?	4-Very much	EE676
	5. How well are you able to concentrate?	5-Totally/extremely	EE677
	6. How safe do you feel in your daily life?		EE678
	7. How healthy is your physical environment?		EE679
104	The following questions ask about how completely you experience or were able to do certain things in the last two weeks.		
	1. Do you have enough energy for everyday life?		EE680
	2. Are you able to accept your bodily appearance?	1-Not at all	EE681
	3. Have you enough money to meet your needs?	2-A little	EE682
	4. How available to you is the information that you need in your day-to-day life?	3-Moderately 4-Mostly	EE683
	5. To what extent do you have the opportunity for leisure activities?	5-Completely	EE684
105	How well are you able to get around?		
		1-Very badly 2-Badly 3-Neither well nor bad 4-Well 5-Very well	EE685
106	The following questions ask you to say how good or satisfied you have felt about various aspects of your life over the last two weeks.		
	1. How satisfied are you with your sleep?		EE686
	2. How satisfied are you with your ability to perform your daily living activities?		EE687
	3. How satisfied are you with your capacity for work?		EE688
	4. How satisfied are you with yourself?		EE689
	5. How satisfied are you with your personal relationships?	1-Very dissatisfied 2-Dissatisfied	EE690
	6. How satisfied are you with your sex life?	3-Neither satisfied nor dissatisfied	EE691
	7. How satisfied are you with the support you get from your friends?	4-Satisfied 5-Very satisfied	EE692
	8. How satisfied are you with the conditions of your living place?		EE693
	9. How satisfied are you with your access to health services?		EE694
	10. How satisfied are you with your transport?		EE695
107	How often do you have negative feelings, such as blue mood, despair, anxiety, depression?		
		1-Never 2-Seldom 3-Quite often	EE696

2. Description of original Instrument: The World Health Organization's Quality of Life

Instrument-short version (WHOQOL-BREF)

The WHOQOL-BREF (cf. The WHOQOL Group, 1998) is an abbreviated 26 item version of the WHOQOL-100, which was developed by World Health Organization (WHO), with the aid of 15 collaborating centres around the world. The WHOQOL-BREF is a self-administered scale that covers four domains of quality of life: psychological, physical health, social relationships and environmental. It also includes one facet on overall quality of life and general health. All items are rated on a five-point scale (1-5). The WHOQOL-BREF is now available in over 20 different languages.

Psychometric Information:

The Cronbach's alpha for each of its domain were: physical health .82, psychological .81, social relationship .68, environmental .80 (Skevington, et al., 2004). The WHOQOL-BREF has the ability to discriminate between sick and well respondents (Skevington, 2004), and between outpatients on the basis of their level of depression (Berlim, et al., 2005). It was also sensitive to improvement after treatment with antidepressants (Berlim, et al., 2005).

Base References/Primary Citations:

Berlim MT, Pavanello DP, Caldieraro MAK, Fleck MP. (2005). Reliability and validity of the WHOQOL BREF in a sample of Brazilian outpatients with major depression. *Quality of Life Research* 14(2): 561-564.

Development of the World Health Organization WHOQOL-BREF quality of life assessment. The WHOQOL Group. (1998) *Psychological Medicine* 28(3): 551-558.

Skevington SM, Lotfy M, O'Connell KA, WHOQOL Group. (2004). The World Health Organization's WHOQOL-BREF quality of life assessment: psychometric properties and results of the international field trial: A report from the WHOQOL group. *Quality of Life Research* 13(2): 299-310.

3. Rationale for choosing the questions:

The WHOQOL-BREF is a sound, cross-culturally valid assessment of quality of life (Skevington, et al., 2004).

4. Revision during the data collection period:

No revisions have been made in the questions.