

Corrigendum

Validation of a semi-quantitative food-frequency questionnaire used among 2-year-old Norwegian children – Corrigendum

LF Andersen, B Lande, K Trygg and G Hay

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There is a programming error which resulted in a systematic error in the data previously published from the validation study of a semi-food frequency questionnaire (SFFQ) used among Norwegian 2-year-olds. Specifically, the error caused the food intake estimates for the girls (from the SFFQ) to be divided with 2. Thus, this error has consequences for the absolute intake values for the SFFQ presented in original Table 2 (nutrient intake) and in original Table 5 (food intake). Some changes were observed for the correlation coefficients for absolute nutrient intake (in original Table 3) and for food intake (in original Table 5). However, the median correlation coefficients for the absolute nutrient intake and food intake were unchanged. There were some changes for the percentage correctly classified presented in original Table 4, however the median percentage was unchanged.

The identified error does not have consequences for the nutrient density results or for any of the results from the weighed food record. The recalculated and correct values for all the results based on absolute nutrient intake and food intake are presented in Table A and Table B below.

The validity of the SFFQ related to different background parameters are only presented in the text in the original paper (page 759–760). The identified error results in minor changes for the validity according to mothers' education and if the child are in day care or not. Larger changes were observed for the validity according to siblings or not; the correlation coefficients for most micronutrients observed for the group of children with siblings were significant different from those observed among the children without siblings (in the original paper significant differences were found for macronutrients).

Table A Daily intake of energy and nutrients based on the SFFQ and WR (supplements are included) with values expressed as median (P_{25} , P_{75}), Spearman's r and classification in to quartiles ($n = 187$)

Nutrients	Absolute intake†		Absolute intake†	Absolute intake†	
	SFFQ	WR	Spearman's r	Correctly classified (%)	Grossly Misclassified (%)
Energy	5652 (4852, 6550)	4161 (3713, 4535)***	0.14	33	9
Protein	44.4 (38.0, 50.8)	32.9 (28.4, 37.3)***	0.29***	26	7
Total fat	52.4 (42.0, 64.0)	36.5 (31.6, 41.0)***	0.25**	33	8
SFA	21.5 (17.7, 26.2)	15.8 (13.8, 18.6)***	0.30***	32	7
MUFA	15.9 (13.0, 19.1)	11.5 (9.5, 13.1)***	0.30***	34	7
PUFA	8.1 (5.9, 11.5)	5.3 (4.4, 6.6)***	0.36***	39	6
Total carbo	172.2 (148.0, 205.0)	131.6 (114.2, 146.2)***	0.22**	35	7
Sugar‡	34.2 (22.5, 48.0)	32.7 (23.5, 44.0)	0.44***	33	4
Fiber	12.2 (9.3, 15.3)	7.2 (5.4, 8.9)***	0.34***	36	5
Vitamin A	1586 (1130, 2230)	694 (473, 1027)***	0.59***	43	3
Vitamin D	9.1 (5.8, 13.7)	3.9 (1.6, 7.3)***	0.48***	41	4
Vitamin E	9.3 (6.2, 12.7)	4.7 (2.9, 7.2)***	0.48***	36	3
Thiamin	1.12 (0.86, 1.64)	0.66 (0.55, 0.91)***	0.52***	44	4
Riboflavin	1.63 (1.24, 2.24)	1.06 (0.84, 1.33)***	0.51***	45	3
Vitamin C	88 (62, 119)	60 (42, 79)***	0.43***	42	5
Calcium	697 (559, 872)	520 (406, 649)***	0.38***	32	5
Iron	6.5 (5.2, 8.0)	4.5 (3.6, 5.2)***	0.42***	35	1

SFFQ – semi-quantitative food frequency questionnaire; WR – weighed records; r – Spearman's rank correlation coefficient; P_{25} = 25th percentile, P_{75} = 75th percentile; SFA – saturated fatty acids; MUFA – monounsaturated fatty acids; PUFA – polyunsaturated fatty acids.

†Absolute intake: Energy was measured as kJ; Fats, protein and carbohydrates in g; vitamin A and D in μg ; The other vitamins and minerals in mg.

‡Added sugar.

$p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

The conclusion should be changed to;

“In summary, the present validation study indicates that the SFFQ used among 2-year-olds in Norway over-estimates the median intakes of most nutrients and foods. The capability of the questionnaire to rank children according to nutrient intake was low, but increased when using nutrient density values instead of absolute values. The ability to rank children according to foods was moderate. Furthermore, we found that the validity of the SFFQ did not seem to be influenced by length of mothers' education or whether the child was attending day care or not.”

Table B Daily intake of different food items (g per day) based on the SFFQ and WR with values expressed as median (P₂₅, P₇₅) and Spearman's r (n = 187)

Food	SFFQ	WR	r
Bread	93 (63, 120)	57 (43, 78)***	0.52***
Cake	15 (9, 23)	20 (10, 35)***	0.39***
Potatoes	19 (10, 43)	12 (5, 22)***	0.28***
Vegetables	26 (13, 45)	16 (7, 30)***	0.46***
Fruit, berries	167 (102, 267)	112 (66, 175)***	0.57***
Fruit juice	34 (0, 86)	21 (0, 69)***	0.63***
Meat	42 (29, 54)	33 (21, 48)***	0.48***
Fish	16 (10, 24)	11 (4, 21)***	0.44***
Cheese	14 (10, 24)	10 (6, 16)***	0.55***
Yoghurt	81 (36, 125)	45 (13, 87)***	0.54***
Milk	269 (156, 412)	220 (114, 314)***	0.54***
Soft drinks† with sugar	86 (21, 231)	116 (51, 204)	0.51***
Soft drinks without sugar	0 (0, 0)	0 (0, 36)*	0.44***
Chocolate, sweets	3 (1, 6)	4 (1, 8)*	0.32***
Cod liver oil	0 (0, 4)	0 (0, 1.4)***	0.71***

SFFQ – semi-quantitative food frequency questionnaire; WR – weighed records; P₂₅ = 25th percentiles, P₇₅ = 75th percentile; r – Spearman's rank correlation coefficient.

†Soft drinks is carbonated soft drinks and squash.

*p < 0.05, **p < 0.01, ***p < 0.001.

Reference

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