

**Table 1.** Mothers' and fathers' mean scores on the Hypoglycaemia Fear Survey (HFS-P) worry subscale, the Family Burden scale and the Hopkins Symptom Checklist–25 item (HSCL-25) among subgroups of parents of children ( $n = 115$ ) with type 1 diabetes

	HFS-P worry subscale*				Family Burden scale**				HSCL-25†			
	Mothers		Fathers		Mothers		Fathers		Mothers		Fathers	
	Mean (SD)	$P^{\ddagger}$	Mean (SD)	$P^{\ddagger}$	Mean (SD)	$P^{\ddagger}$	Mean (SD)	$P^{\ddagger}$	Mean (SD)	$P^{\ddagger}$	Mean (SD)	$P^{\ddagger}$
<b>Parents of children in various age groups</b>		0.817		0.202		0.817		0.698		0.884		0.870
1–5 years (13 children)	36.16 (9.37)		31.90 (5.65)		13.42 (3.73)		13.17 (3.43)		1.37 (0.40)		1.24 (0.29)	
6–11 years (57 children)	37.97 (8.46)		36.25 (9.58)		14.08 (2.77)		14.01 (3.17)		1.38 (0.33)		1.20 (0.23)	
12–15 years (45 children)	37.81 (9.58)		36.89 (7.53)		13.98 (3.81)		13.99 (3.14)		1.41 (0.42)		1.25 (0.27)	
<b>Parents of children with different duration of diabetes</b>		0.080		0.038		0.789		0.084		0.716		0.235
<1 year (17 children)	34.12 (8.82)		31.77 (8.26)		13.77 (2.75)		12.60 (2.72)		1.31 (0.21)		1.16 (0.19)	
≥1 year (98 children)	38.36 (8.82)		36.72 (8.39)		14.01 (3.36)		14.14 (3.20)					
<b>Parents of boys and girls</b>		0.501		0.463		0.319		0.441		0.981		0.980
Parents of boys	39.04 (8.65)		36.70 (8.01)		14.02 (3.03)		13.74 (2.96)		1.41 (0.42)		1.19 (0.17)	
Parents of girls	36.38 (9.05)		35.28 (8.98)		13.92 (3.52)		14.04 (3.37)		1.37 (0.32)		1.25 (0.30)	

\* HFS-P worry subscale score: 15–75.

\*\* Family Burden scale score: 5–25.

† HSCL-25 scale score: 1–4.

‡ ANOVA was performed to test differences in HFS-P worry subscale scores and Family Burden scale scores between the parents of the children in 3 age groups;  $t$ -tests were performed to test differences in HFS-P worry subscale scores and Family Burden scale scores between the parents of the children with duration of diabetes <1 year or ≥1 year and between the parents of boys and girls, respectively; Kruskal-Wallis tests were performed to test differences in HSCL-25 scores between the parents of the children in 3 age groups; and Mann-Whitney tests were performed to test differences in HSCL-25 scores between the parents of children with duration of diabetes <1 year or ≥1 year and between the parents of boys and girls, respectively.

**Table 2a** Bivariate regression analyses between child-related variables and Hypoglycaemia Fear Survey – Parent version (HFS-P) worry and behaviour subscale scores among 115 children with type 1 diabetes and their parents

	HFS-P worry subscale*				HFS-P behaviour subscale**			
	Mothers		Fathers		Mothers		Fathers	
	Regression coefficient <sup>§</sup>	<i>P</i>	Regression coefficient <sup>§</sup>	<i>P</i>	Regression coefficient <sup>§</sup>	<i>P</i>	Regression coefficient <sup>§</sup>	<i>P</i>
Problematic hypoglycaemia in the past year								
1–2 episodes versus 0 episodes	–0.92	0.714	5.29	0.012 <sup>†</sup>	1.59	0.367	2.32	0.129
3–6 episodes versus 0 episodes	1.47	0.543	8.26	0.001 <sup>†</sup>	2.51	0.141	4.32	0.019 <sup>†</sup>
≥7 episodes versus 0 episodes	5.72	0.020 <sup>†</sup>	6.89	0.006 <sup>†</sup>	3.78		–0.31	0.862
						0.028 <sup>†</sup>		
Hypoglycaemia while asleep – yes versus no	3.21	0.094	1.67	0.354	–0.09	0.948	2.29	0.076
Hypoglycaemia with unconsciousness – yes versus no	0.83	0.694	1.48	0.526	–0.09	0.956	–0.01	0.994
Child carries emergency glucose – yes versus no	3.61	0.154	2.72	0.186	2.47	0.170	2.86	0.052
Insulin pump versus not pump	–0.42	0.816	1.36	0.441	–3.28	0.008 <sup>†</sup>	–2.69	0.028 <sup>†</sup>
Blood glucose monitoring								
4–6 times/day versus ≤3	–0.35	0.897	–0.05	0.983	1.45	0.403	0.17	0.921
≥7 times/day versus ≤3	1.58	0.582	1.13	0.685	4.96	0.008 <sup>†</sup>	2.82	0.146
Monitoring at night								
– every week or more versus every month or less	6.32	0.001 <sup>†</sup>	0.83	0.680	3.28	0.017 <sup>†</sup>	2.62	0.065
HbA <sub>1c</sub> level	1.20	0.161	1.85	0.025 <sup>†</sup>	0.91	0.131	–0.34	0.571
Child’s age	0.10	0.690	0.31	0.191	–0.63	0.001 <sup>†</sup>	–0.37	0.027 <sup>†</sup>
Duration of diabetes	–0.15	0.637	–0.16	0.580	–0.26	0.238	–0.38	0.057
Comorbid disease – yes versus no	6.71	0.001 <sup>†</sup>	4.17	0.033 <sup>†</sup>	1.89	0.190	2.24	0.108
Boy versus girl	2.65	0.128	1.42	0.412	1.76	0.152	1.04	0.395

\* HFS-P worry subscale score: 15–75.

\*\* HFS-P worry subscale score: 10–50.

§ Unstandardized regression coefficients

† Significant at  $P < 0.05$ .

**Table 2b** Bivariate regression analyses between child-related variables and Family Burden Scale and HSCL-25 scores among 115 children with type 1 diabetes and their parents

	Family Burden Scale*				HSCL-25**			
	Mothers		Fathers		Mothers		Fathers	
	Regression coefficient <sup>§</sup>	<i>P</i>	Regression coefficient <sup>§</sup>	<i>P</i>	Regression coefficient <sup>§</sup>	<i>P</i>	Regression coefficient <sup>§</sup>	<i>P</i>
Problematic hypoglycaemia in the past year								
1–2 episodes versus 0 episodes	–0.39	0.681	0.70	0.395	–0.02	0.872	0.03	0.590
3–6 episodes versus 0 episodes	–0.01	0.993	2.01	0.043 <sup>†</sup>	0.20	0.043 <sup>†</sup>	0.20	0.008 <sup>†</sup>
≥7 episodes versus 0 episodes	1.72	0.061	2.66	0.007 <sup>†</sup>	0.28	0.005 <sup>†</sup>	–0.02	0.829
Hypoglycaemia while asleep – yes versus no	0.02	0.981	0.57	0.512	0.11	0.220	–0.03	0.696
Hypoglycaemia with unconsciousness – yes versus no	0.89	0.213	0.80	0.247	0.23	0.003 <sup>†</sup>	0.07	0.238
Blood glucose monitoring								
4–6 times/day versus ≤3	–0.09	0.926	0.32	0.734	0.03	0.774	–0.03	0.692
≥7 times/day versus ≤3	0.52	0.634	1.04	0.322	0.08	0.541	0.14	0.077
Monitoring at night								
– every week or more versus every month or less	2.37	0.001 <sup>†</sup>	1.85	0.013 <sup>†</sup>	0.17	0.037 <sup>†</sup>	0.08	0.208
HbA <sub>1c</sub> level	0.42	0.183	0.32	0.313	0.04	0.313	0.02	0.418
Child's age	–0.01	0.953	0.02	0.788	0.00	0.944	0.01	0.473
Duration of diabetes	–0.10	0.382	–0.09	0.387	–0.02	0.252	0.00	0.628
Comorbid disease – yes versus no	2.00	0.007 <sup>†</sup>	1.30	0.078	0.14	0.091	0.11	0.050 <sup>†</sup>
HSCL-25 score	4.30	0.001 <sup>†</sup>	1.67	0.197	–	–	–	–
Boy versus girl	0.10	0.874	–0.29	0.653	0.04	0.622	–0.06	0.279

\* Family Burden Scale score: 5–25.

\*\* HSCL-25 scale score: 1–4.

§ Unstandardized regression coefficients.

† Significant at  $P < 0.05$ .

**Table 3** Exploratory multiple regression analyses of associations between child-related variables and Hypoglycaemia Fear Survey – Parent version (HFS-P) behaviour subscale scores for mothers and fathers with respectively 10 and 9 items\*

	Mothers				Fathers			
	HFS-P behaviour 10 items		HFS-P behaviour 9 items included		HFS-P behaviour 10 items		HFS-P behaviour 9 items included	
	Regression coefficient <sup>§</sup>	<i>P</i>	Regression coefficient <sup>§</sup>	<i>P</i>	Regression coefficient <sup>§</sup>	<i>P</i>	Regression coefficient <sup>§</sup>	<i>P</i>
Problematic hypoglycaemia in the past year								
1–2 episodes versus 0 episodes	3.17	0.118	2.93	0.137	0.97	0.546	1.38	0.359
3–6 episodes versus 0 episodes	1.62	0.415	1.54	0.426	3.80	0.048 <sup>†</sup>	3.75	0.038 <sup>†</sup>
≥7 episodes versus 0 episodes	2.69	0.164	2.87	0.127	–3.32	0.085	–2.67	0.138
Hypoglycaemia while asleep – yes versus no	0.83	0.597	0.58	0.701	–3.21	0.022 <sup>†</sup>	–2.49	0.056
Hypoglycaemia with unconsciousness – yes versus no	–0.52	0.768	–0.40	0.814	–2.01	0.249	–2.18	0.184
Child carries emergency glucose – yes versus no	2.12	0.302	2.81	0.161	–2.68	0.091	–1.55	0.296
Insulin pump versus not pump	–3.69	0.011 <sup>†</sup>	–3.68	0.009 <sup>†</sup>	–3.29	0.015 <sup>†</sup>	–3.48	0.006 <sup>†</sup>
Blood glucose monitoring								
4–6 times/day versus ≤3	0.70	0.739	–0.22	0.916	–1.07	0.545	–1.37	0.422
≥7 times/day versus ≤3	3.37	0.175	2.13	0.376	1.01	0.636	0.77	0.702
Monitoring at night								
– every week or more versus every month or less	1.69	0.320	1.22	0.460	1.04	0.473	1.11	0.414
HbA <sub>1c</sub> level	0.72	0.313	0.77	0.268	0.09	0.889	0.19	0.749
Child’s age	–0.41	0.093	–0.47	0.047 <sup>†</sup>	–0.03	0.872	–0.11	0.586
Duration of diabetes	0.15	0.603	0.14	0.619	–0.47	0.064	–0.34	0.151
Comorbid disease – yes versus no	–1.82	0.260	–1.80	0.250	–0.90	0.521	–0.52	0.690

\* The purpose of the analysis was to exclude overlap between the item “How often do you have your child carry emergency glucose?” in the HFS-P behaviour subscale and the exploratory variable “Does your child carry emergency glucose with him at all times?”. The analysis is also an example of the exploratory analyses performed (separately for mothers and fathers) for the dissertation with the same analysis model as the GEE analyses presented in Articles I and II.

§ Unstandardized regression coefficients.

† Significant at  $P < 0.05$ .

**Table 4** Mean scores for mothers and fathers on the HFS-P worry subscale

HFS-P worry subscale items	Mothers		Fathers		Sex difference
	Mean score	SD	Mean score	SD	<i>P</i> *
1. Child not recognizing or realizing a reaction	2.78	1.053	2.68	0.888	0.283
2. Child not having food, fruit or juice with him or her	2.70	0.937	2.76	0.839	0.321
3. Child feeling dizzy or passing out in public	2.69	1.056	2.42	0.922	0.255
4. Child having a reaction while asleep	3.37	0.901	2.91	0.851	0.001 <sup>†</sup>
5. Child embarrassing self or friends or family in a social situation	1.14	0.431	1.18	0.540	0.496
6. Child having a reaction while alone	3.12	1.008	2.83	0.969	0.268
7. Child appearing to be “stupid” or clumsy	1.29	0.653	1.35	0.748	0.952
8. Child losing control	2.37	1.158	2.23	0.982	0.684
9. No one being around to help during a reaction.	3.28	0.948	2.91	0.876	0.002 <sup>†</sup>
10. Child making mistake or having accident at school	1.94	1.003	1.96	0.884	0.336
11. Child getting a bad evaluation at school because of something that happens when his or her blood sugar is low	1.79	0.993	1.85	1.034	0.454
12. Child having seizures or convulsions	2.93	0.961	2.59	0.875	0.004 <sup>†</sup>
13. Child developing long-term complications from frequent low blood sugar	2.62	1.144	2.88	1.029	0.097
14. Child feeling light-headed or faint	2.55	0.872	2.52	0.882	0.529
15. Child having an insulin reaction	3.15	0.973	2.92	0.920	0.012 <sup>††</sup>

\* Non-parametric test, Wilcoxon matched-pairs signed-rank tests.

<sup>†</sup> *P* < 0.01.

<sup>††</sup> *P* < 0.05.

**Table 5.** Mothers' and fathers' (85 couples) reports on 10 questions regarding "who is doing what in everyday life" related to a child's type 1 diabetes

	Mothers' reports*				Fathers' reports**			
	Mother or mother and child	Father or father and child	Mother and father or mother, father and child	Child	Mother or mother and child	Father or father and child	Mother and father or mother, father and child	Child
	% (n)	% (n)	% (n)	% (n)	% (n)	% (n)	% (n)	% (n)
1. Who informs friends about the child's diabetes?	31.3 (26)	1.2 (1)	60.2 (50)	7.2 (6)	17.6 (15)	2.4 (2)	76.5 (65)	3.5 (3)
2. Who informs the school or kindergarten about the child's diabetes?	43.4 (36)	2.4 (2)	53.0 (44)	1.2 (1)	34.5 (29)	1.2 (1)	63.1 (53)	1.2 (1)
3. Who remembers the insulin injections?	19.8 (16)	1.2 (1)	64.2 (52)	14.8 (12)	17.9 (15)	2.4 (2)	65.5 (55)	14.3 (12)
4. Who decides and adjusts the insulin doses?	27.1 (23)	3.5 (3)	60.0 (51)	9.4 (8)	17.1 (14)	3.7 (3)	64.6 (53)	14.6 (12)
5. Who decides what the child should eat for mealtimes and snacks?	30.1 (25)	1.2 (1)	53.0 (44)	15.7 (13)	20.2 (17)	1.2 (1)	61.9 (52)	16.7 (14)
6. Who brings along extra food in case of low blood glucose?	40.4 (32)	2.5 (2)	50.6 (40)	6.3 (5)	19.3 (16)	6.0 (5)	65.1 (54)	9.6 (8)
7. Who remembers the need for blood glucose measurements?	26.2 (22)	1.2 (1)	61.9 (52)	10.7 (9)	13.6 (11)	3.7 (3)	76.5 (62)	6.2 (5)
8. Who looks after changes in the child's general health status?	38.8 (31)	–	61.3 (49)	–	18.1 (15)	6.0 (5)	74.7 (62)	1.2 (1)
9. Who looks after the variation in injection sites?	28.4 (23)	1.2 (1)	50.6 (41)	19.8 (16)	20.0 (17)	–	62.4 (53)	17.6 (15)
10. Who takes care of and observes early signs of low blood glucose in the child?	18.1 (15)	–	54.2 (45)	27.7 (23)	8.4 (7)	–	75.9 (63)	15.7 (13)

\* n = 79–85.

\*\* n = 81–85.