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Exploration of social network, social integration, and socioeconomic status in families with young children with type 1 diabetes.

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Background:

Psychosocial factors are important for patients with chronic diseases such as type 1 diabetes. Lack of social network and poor social support are risk factors that affect morbidity. Little is known about social network and social integration of families with children with type 1 diabetes.

Objective and hypotheses:

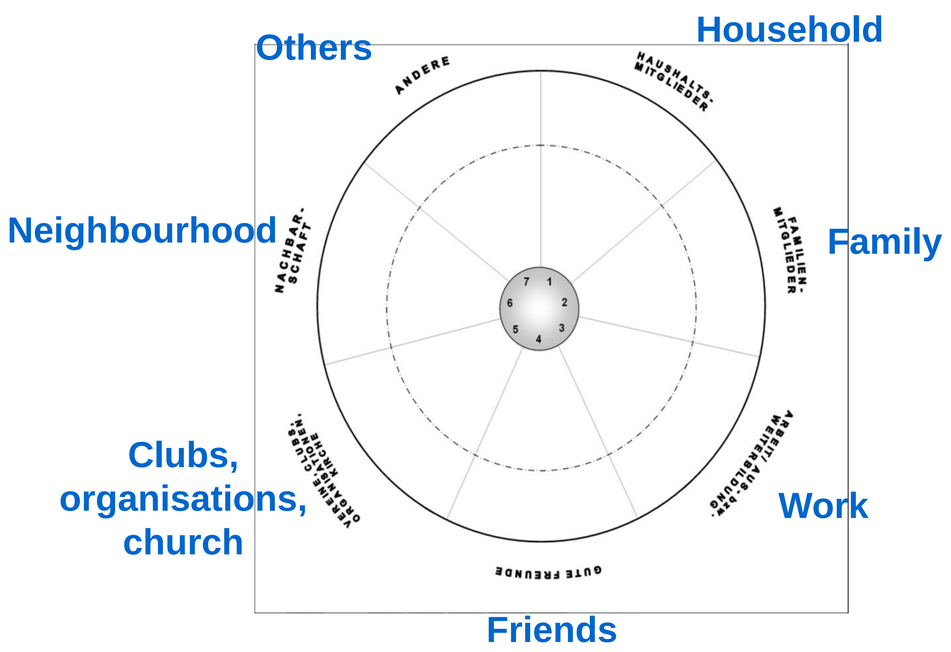
Aim was to explore the social network of families with young children with type 1 diabetes and to examine associations between indices of social network and integration, socioeconomic status, and glycaemic control.

Method:

Families with children aged less than 12 years with type 1 diabetes were included in the cross-sectional study. Clinical data and HbA1c levels were collected. Self-report questionnaires were used to assess socioeconomic status.

Interviews using the Multidimensional Social Contact Circle-Questionnaire (MuSC-Q) were performed for exploration of social network. Social net size and integration index were calculated. Statistical analysis including regression analysis was performed.

Multidimensional Social Contact Circle-Questionnaire (MuSC-Q)



Lischka, 2009

Results:

Characteristics of patients

	Children with type 1 diabetes
Number	83
Age (years)	8.9 +/- 2.4
Gender ratio (male/female)	52 % / 48 %
Diabetes duration (years)	5.2 +/- 2.7
HbA1c (%)	7.8 +/- 0.8
Children with HbA1c < 7.5 %	36 %
Insulin pump treatment	55 %
Episodes of DKA (per year)	1
Episodes of severe hypoglycaemias (per year)	0
Socioeconomic status: low / moderate / high	37 % / 22 % / 41 %
Single parent	17 %

DKA = Diabetic ketoacidosis. Data expressed as mean +/- SD

High socioeconomic status was significantly associated with better glycaemic control compared to moderate and low socioeconomic status (HbA1c 7.5+/-0.7% vs 7.9+/-0.7% and 8.0+/-0.8 %; p=0.008)

Regression analysis

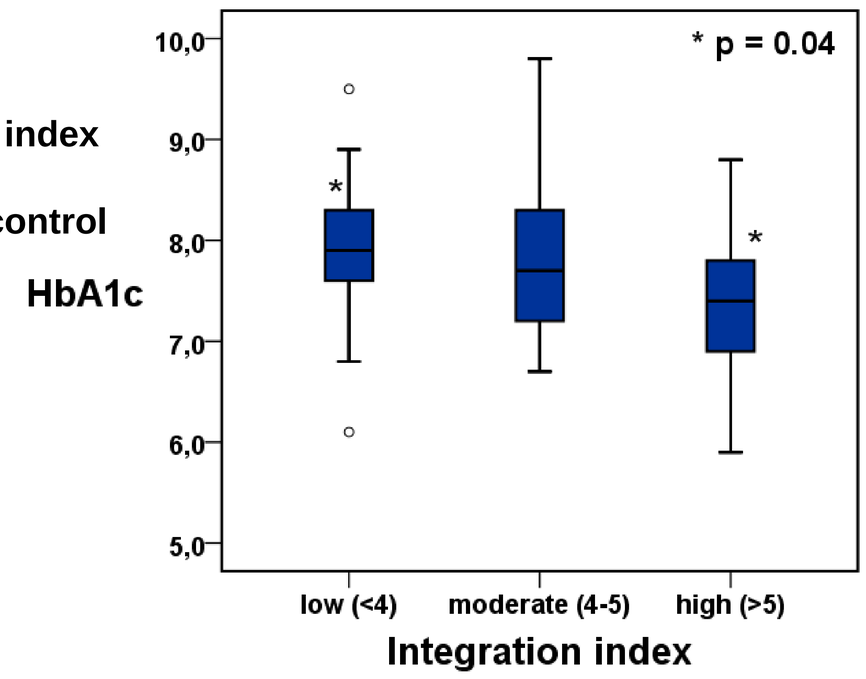
Variable	Regression coefficient ß	p
Age	-0.093	0.44
Gender	0.078	0.45
Diabetes duration	**0.493**	**<0.001**
Insulin pump treatment	0.112	0.30
Socioeconomic status	**-0.334**	**0.002**
Size of social net	-0.083	0.50
Integration index	0.014	0.90

Regression analysis identified longer diabetes duration and low socioeconomic status as risk factors for poor glycaemic control.

The caregivers reported a mean **total size of their social net of 17.2 persons** (size of social net in the general population: 20-25 persons) in on average 4 out of 7 potential areas (**mean integration index 4.4**).

No significant correlations were seen between social net size and HbA1c. Low integration index was associated with poor glycaemic control (p=0.03). Higher socioeconomic status was associated with higher integration index (p=0.018).

Integration index and glycaemic control



Conclusion:

This study describes the social network and social integration of families with young children with type 1 diabetes. Diabetes duration and socioeconomic status were significant risk factors for glycaemic control.

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