Differential impact of type 1 and type 2 diabetes on families: a UK cross-sectional study using FROM-16

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Introduction

A person's diabetes affects the quality of life (QoL) of family members. However, how the family impact varies across Type 1 (T1D) and Type 2 diabetes mellitus (T2D) was unknown.

Aims

The study aimed to measure the impact of T1D and T2D on the QoL of family members/partners and assess whether there is any difference in family impact.

Methods

- A cross-sectional study, recruited online through Patient Support Groups: **Diabetes UK**, **Juvenile Diabetes Research Foundation (JDRF), Healthwise Wales (HWW)** and **Social Services Departments in Wales.**
- The study involved UK family members/partners of people with diabetes completing the **Family Reported Outcome Measure-16 (FROM-16).**

FROM-16

The FROM-16 is an extensively validated generic family QoL questionnaire which measures the impact of any disease, across all medical specialities, on the QoL of family members or partners of patients of any age [1-5].
The FROM-16 comprises 16 items, each with three response options: 'Not at All' (scoring 0), 'A Little' (scoring 1) and 'A Lot.'
The lowest possible score of FROM-16 is 0, and the highest is 32.
The higher the score, the greater the negative impact on the family member's QoL.

Results

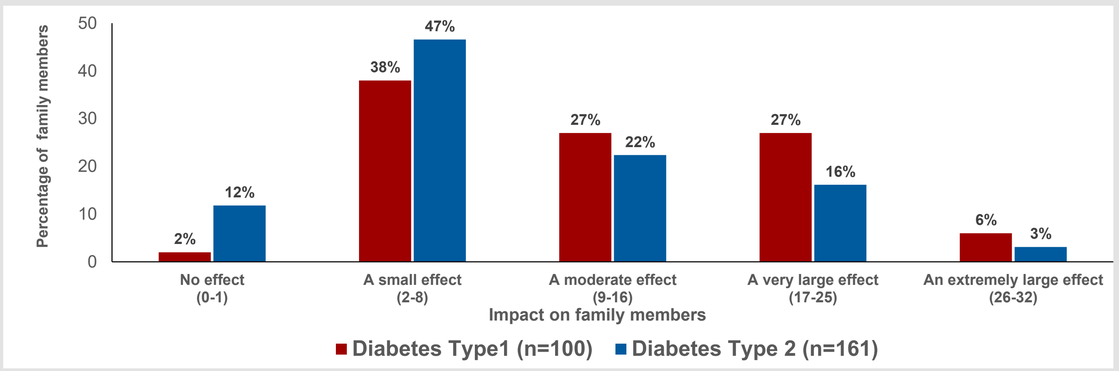
- **261 family members/partners** (mean age=57.9 years, SD=13.8; females=68.2%) of **people with diabetes** (mean age=57.7, SD=20.6; females=38.3%; **T1D n=100**; **T2D n=161**) completed the FROM-16.
- The family members were mostly **spouses/partners (67%),** followed by **Parents (15%),** Adult children (13%), and Siblings (5%).
- The **overall FROM-16 mean** score was **10.5,** SD=7.8, meaning a '**moderate effect**' on the QoL of family members of people with diabetes.
- **25% of family members** experienced a "**very large effect'** or **'extremely large effect'** on their QoL (FROM-16 score ≥ 17) (Table 1).

Table 1 FROM-16 severity score banding describing the impact of a person's diabetes on family members/partners (n=261) [3].

FROM-16 score banding	Number of family members	% of family members
No effect (0-1)	21	8.1
A little effect (2-8)	113	43.3
A moderate effect (9-16)	63	24.1
A very large effect (17-25)	53	20.3
An extremely large effect (26-32)	11	4.2
Total	**261**	**100**

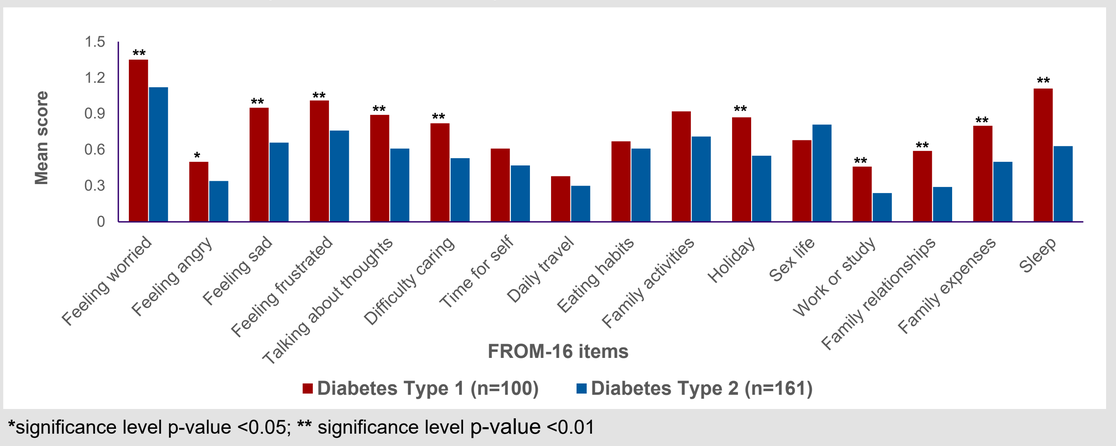
- The family impact of **T1D** (mean **FROM-16=12.6,** SD=7.9) was greater than that of **T2D** (mean **FROM-16=9.2,** SD=7.5, p<0.01).
- The family members of **people with T1D** were more impacted (33% having FROM-16 ≥17) than the family members of **people with T2D** (19% FROM-16 scores ≥17) (Figure 1).

Figure 1 Impact on Quality of life of family members/partners of people with diabetes Type 1 and Type 2 [3].



- The difference in impact between the family members of **T1D** and **T2D** was also noticed at the **individual item level.**
- **T1D family members** had significantly **higher mean scores** for feeling **worried**, feeling **sad**, feeling **angry,** feeling **frustrated**, talking about **thoughts**, having **difficulty caring** for their relative, effect on **work or study**, effect on **holidays**, effect on **family relationships**, effect on **family expenses**, and effect on **sleep** (p<0.05) (Figure 2).

Figure 2 Family impact of diabetes Type 1 and Type 2 across individual FROM-16 items (max=2, min=0).



*significance level p-value <0.05; ** significance level p-value <0.01

- Being "**female**" and "**parents** of children and adolescents" were significant predictors of greater impact.
- Family members of people with **T2D** had a **lower risk** of experiencing a **high family impact** (FROM-16 score ≥ 17) compared with family members of people with **T1D** (RR: 0.561, 95% CI: 0.371-0.849).

Conclusions

- The family members of people with **T1D,** particularly **females** and those caring for **children and adolescents**, experience a greater impact on their QoL compared to those with T2D.
- These findings have **clinical and resource implications**, indicating a need to assess this impact as a part of routine diabetes care to support impacted family members.
- The **FROM-16 could assess this impact in routine practice** and facilitate appropriate support to families.

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Read the full paper here **Contact Author: Shahr45@cardiff.ac.uk**