Parents’ perceptions of physical activity for their children with Type 1 Diabetes

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“You can’t just jump on a bike and go”
Overview

• Background and purpose
• Methods
• Results
• Discussion
• Implications
Background
• Type 1 Diabetes (T1D): autoimmune disease that destroys insulin producing cells in the pancreas.
• Managed by insulin injection and balancing carbohydrate intake with physical activity.
• Parents take a dominant role in T1D management.

Physical activity
• Children with T1D advised: 60 minutes moderate-to-vigorous physical activity per day [1].
• Children with T1D are not meeting recommended level of activity [2].
• Might be less active than peers without T1D [3].
• Parents as gatekeepers to children’s health and behaviour [4].
• Parental concerns about hypoglycaemia [5].

Purpose
To understand parents’ perceptions of physical activity for their children with T1D and to inform the practice of those working with children who have T1D.
## Methods

### Inclusion
- Parents of a child with T1D aged 7 – 13 yrs
- Diagnosed for at least 3 months

### Recruitment
- Parent support groups and Diabetes UK magazine

### Data collection
- Semi structured interview
- Telephone (n = 18) or face-to-face (n = 2)
- Audio recorded
Results

Analysis

• Interviews transcribed verbatim
• Thematic analysis (Braun & Clarke) [7]

Subjects

• Sample size = 20
• 18 mothers, 2 fathers

Themes

• 7 major themes
• 15 corresponding sub themes
## Results

Perceived conflict between careful planning and spontaneous physical activity

<table>
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<tr>
<th>Parents recognise the importance of having a predictable routine</th>
<th>Parents perceive problems with the spontaneous nature of children’s physical activity</th>
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<tbody>
<tr>
<td>“We do have struggles every now and again, particularly when something different is happening because obviously it’s a change to routine…School trips spring to mind, sports day, fun days” (P01).</td>
<td>“You can’t just jump on a bike and go, you have to think about how far you’re going, what equipment you’ve got with you, has he tested beforehand, what levels he’s at” (P02).</td>
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</tbody>
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## Results

The battle for blood glucose control

<table>
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<th>Blood glucose monitoring requires vigilance and commitment from parents</th>
<th>Hypoglycaemia is challenging and a cause of concern for parents</th>
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<td>“24/7 job” (P08, P10).</td>
<td>“he pulled a spectacular hypo and had to come out for fifteen minutes…it’s devastating” (P01).</td>
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<td>“constant balancing act” (P20).</td>
<td>“coloured her whole view that she didn’t want to go into the P.E. lesson, to the point where she’d say she didn’t feel very well on those days she’s got P.E.” (P07).</td>
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<td>“I had to make her get out of the pool half way through the lesson and dry off her finger and do a blood sugar, and that was quite awkward” (P13).</td>
<td>“if she has a big hypo…there’s nobody there that knows what to do, it’s always the worry” (P08).</td>
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Results
Parents are determined to overcome hurdles to physical activity

Parents demonstrate assertiveness

“we did take them [school] to court and we did ring the disability related discrimination tribunal” (P18).

“I’m very direct, not wishy washy about it” (P06).

“I do the training for them [the teachers at school], because I don’t trust anyone else to do it” (P16).
Results
Children’s participation in physical activity as dependent on parental management and supervision

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<th>Parents perceive difficulties allowing their child to achieve independence</th>
<th>Parents are reluctant to give others responsibility</th>
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<td>“the biggest thing that you lose as a child with Type 1 Diabetes is independence and freedom” (P05).</td>
<td>“I’d prefer if she didn’t want to do a lot of sporty things, because I’m not happy leaving her” (P13).</td>
</tr>
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<td>“we want Harry to have that freedom, so we literally sit outside the door in the car. Harry knows we’re there and they [Cub Scout leaders] know we are there if there’s a problem” (P06).</td>
<td>“for Taekwondo I’m always there, because… they’re not trained in how to treat him if he suddenly has a hypo” (P02).</td>
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<tr>
<td>“at holiday club…they didn’t test him before dinner…and I said why didn’t you do his tests, and they said ‘oh we were busy’” (P03).</td>
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## Results

Parents recognise the importance of support systems

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<th>Parents value the support received from the hospital</th>
<th>Parents value the support received from school</th>
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<tr>
<td>“we’ve always been able to contact them [the hospital] when we’ve had specific activities going on, like if we’ve been out on a long hike” (P12).</td>
<td>“they’ve learnt to use the technology that we’ve given them and they have made every effort to try and fit in with what we require” (P07).</td>
</tr>
<tr>
<td>“if I say when she does more activity I’ll be checking even more at night, they …don’t really understand” (P13).</td>
<td>“teachers lacking confidence in dealing with hypos…teachers are absolutely terrified of hypos in sporting activity and so they will not push or challenge him at all” (P11).</td>
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Discussion

• Parents serve as gate-keepers to physical activity.
• They perceive challenges relating to physical activity, but value the supportive systems that enable their child to overcome these hurdles.
• Highlights the importance of education about how to manage physical activity and its side effects.
• And of identifying support networks that may reduce parental burden of responsibility e.g., teachers, activity leaders, coaches, healthcare team.
• Sensitise healthcare providers and school personnel to the issues confronted by children with T1D and their parents.
Evaluation

- High consistency of themes supports credibility [8, 9].
- Methodological disparity: telephone and face-to-face interviews.
- Self-selected sample who may have been attracted to the research question.
- Predominantly the maternal perspective – role of fathers could be different and warrants research into paternal perspective.
Acknowledgements

• This review was conducted as part of a PhD funded by a DTA studentship from the University of Nottingham (School of Health Sciences and Division of Psychiatry and Applied Psychology NIHR CLAHRC).

Special thanks to my supervisors Holly Blake and Cris Glazebrook for their support with this research.

Thank you for listening, any questions?
References