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6-month Progress Report

With acknowledgement to the Science School 2025 Montreal Mentor Team and my fellow Science School attendees who were extremely supportive as I began to shape this research idea in its initial stages.

Title: A Feasibility and Acceptability study of an Acceptance and Commitment Therapy based intervention for adolescents with Type 1 diabetes transitioning from primary to secondary school.

Healthcare Site name: Children's Health Ireland (CHI)

Project Rationale and Description: Adolescents with Type 1 Diabetes experience unique psychosocial challenges in managing this chronic medical condition at this age and stage of development, showing an increased risk of developing mental health difficulties including anxiety, depression, and diabetes related distress (Delamater et al. 2018).

Additionally, early adolescence is the point at which young people reach a significant educational milestone as they transition from primary school to secondary school in Ireland. Those with Type 1 Diabetes at this time may face additional challenges in the context of increased pressures and motivations to succeed socially and take on appropriate levels of independence regarding diabetes management.

The aim of this project was to evaluate the feasibility and acceptability of a tailored intervention for adolescents with Type 1 Diabetes at this timepoint, using the principles of Acceptance and Commitment Therapy in the design.

Acceptance and Commitment Therapy is considered a third wave Cognitive Behavioural Therapy approach which encourages the acceptance of thoughts and feelings as opposed to resistance of this with the ultimate goal of increasing psychological flexibility and improve mental health outcomes (Alho et al. 2024).

This project is conducted in two distinct phases.

Phase 1 includes the recruitment of participants from a paediatric diabetes service who are preparing to transition to secondary school to take part in the intervention along with obtaining informed consent prior to data collection. This stage of intervention involved a 6-week ACT based group facilitated by 2 psychologists each week. This group was timed so that it fell at the end of participants' time in primary school (within the last 2 months specifically). **Phase 2** includes individual 'booster' check-in appointments with the psychologist when attending their routine Diabetes MDT appointments throughout 1st year of secondary school.

Data to measure **feasibility** and **acceptability** will be gathered at the following timepoints:

- Pre group Demographic/Eligibility Information (Parent only)
- Group Session by Session Feedback Survey (Child only)
- Post group Intervention survey (Parent and Child)

Exploratory data will be gathered with 2 Psychosocial measures at the following timepoints:

- Pre-group (child only)
- Post group (child only)
- Post 1st year (end of study) (child only)

Measures to be used: Diabetes Acceptance and Action Scale Revised (DAAS-R) (Gillanders & Barker, 2019 and Problem Areas In Diabetes (PAID Teen) (Weissberg-Benchell, J. et al. 2011

Medical data (HbA1c) will be gathered retrospectively from medical charts.

Project Team:

Dr Rachel Flanagan (Principal Investigator/Senior Counselling Psychologist Diabetes Team CHI Tallaght) Ms Jules Thompson (Co-investigator / Senior Counselling Psychologist Diabetes Team CHI Crumlin)

Dr Moira Kennedy (Co-investigator/Senior Educational Psychologist Diabetes Team CHI Temple St.) Dr Kathy Looney (Co-investigator/ Senior Clinical Psychologist / Assistant Professor UCD)

Ms Tanya Mohile (Co-investigator / Research and Innovation, CHI / Research Assistant) Ms Aoibhinn O'Donoghue (Co-investigator / Research and Innovation, CHI Crumlin)

Professor Edna Roche (Co-Investigator / Consultant Paediatric Endocrinologist, CHI Tallaght) Dr Ciara McDonnell (Co-Investigaotor / Consultant Paediatric Endocrinologist, CHI Tallaght)

Professor Declan Cody (Co-investigator / Consultant Paediatric Endocrinologist, CHI Crumlin/ Clinical Lead in Diabetes and Endocrinology, CHI)

Funding:

Funding of 5,000 USD was provided by ISPAD and Breakthrough T1D at the start of this study for the first half of the project. To date, this funding has been used to fund the support of a Research Assistant to assist with all administrative aspects of the project.

Achievements to date:

Recruitment – Phase 1

After initially contacting or attempting to contact all families attending CHI Diabetes service that may have been eligible for the project based on available information, 16 families were then

shortlisted and a subsequent 7 families agreed to take part, making recruitment 44%.

OBJ OBJ

A total of 14 participants (1 parent :1 child) were recruited for this study.

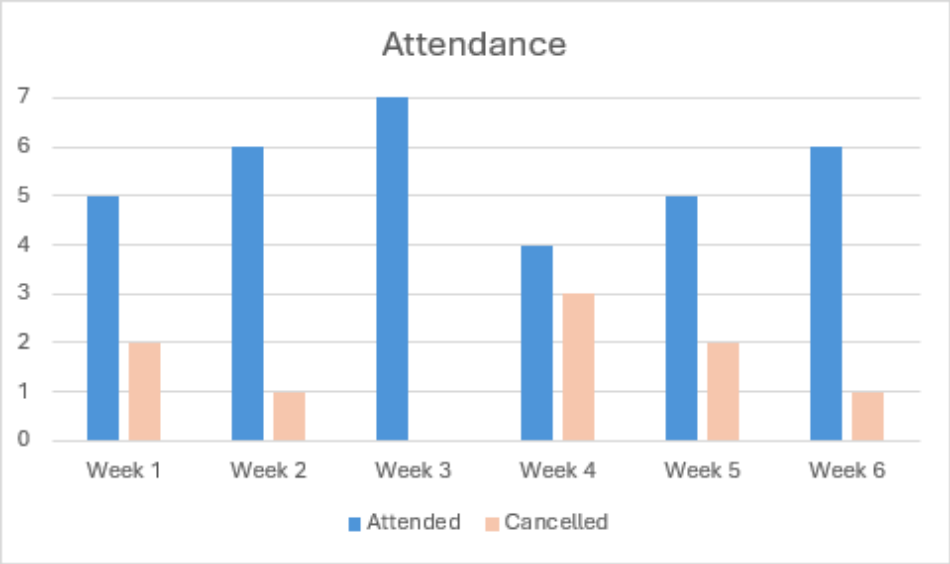
Group: A 6-week group was facilitated (May 15th – June 19th 2026). This group was attended by a total of 7 adolescent participants.

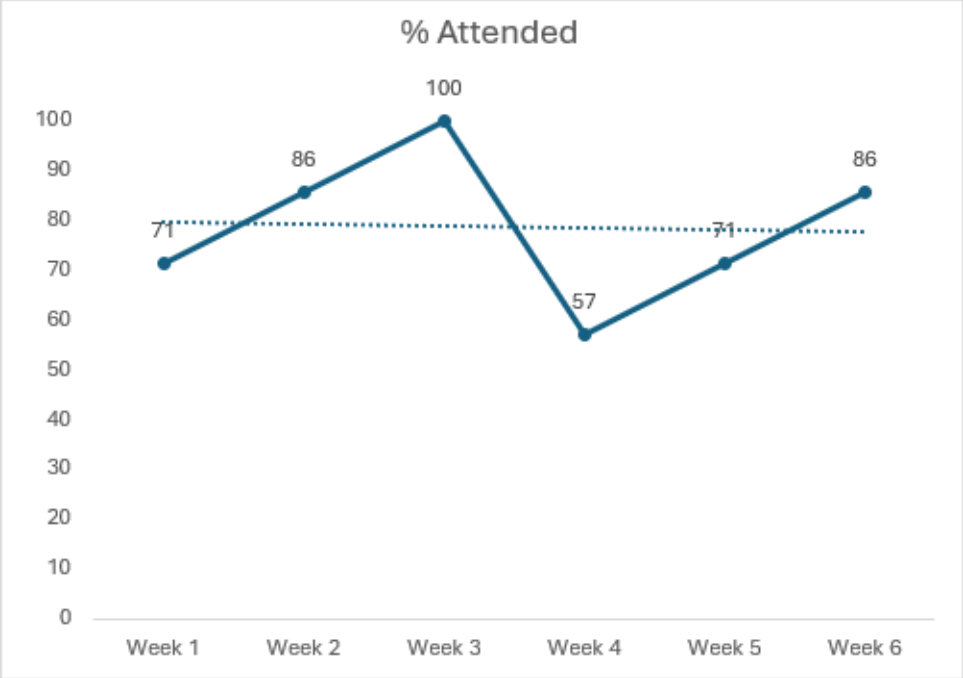
Data Collection – Phase 1

All Phase 1 data has been collected. This includes:

- Consent/Assent forms
- Demographic/Eligibility Information (Parent only)
- Group Session by Session Feedback Survey (Child Only)
- Psychosocial measures: Diabetes Acceptance and Action Scale Revised (DAAS-R) (Child Only) and Problem Areas In Diabetes (PAID Teen) (Child Only pre and post group intervention)
- Post Group Intervention Survey (Parent and Child)

Group Attendance – Phase 1





As demonstrated by the Attendance graphs above, full attendance at group of the 7 child participants was achieved in week 3 with a dip in attendance in week 4 which will be further explored at write-up. Overall, an average of around 80% attendance was seen throughout.

Initial Impressions – Phase 1

Whilst definitive conclusions cannot be drawn until the completion of a full data analysis, initial impressions can be made from the preliminary data and facilitation of the group.

Given the short period of time from ethical approval to the start of the group (approximately 1 month), it is evident that it is possible from the facilitator's perspective to successfully start and follow through with such an intervention logistically in a relatively short time frame.

Regarding retention rates, it was also apparent that the end of the school year — particularly the end of primary school — is a time of change in routine, with various celebrations and milestone activities taking place for the young people involved. This additionally had an impact week to week on attendance; however, overall retention rates were considered high by the facilitators. It is likely that more detailed information on feasibility and acceptability will be obtained by further data analysis of responses from the participants to questions pertaining to this. Unfortunately, information from those who did not agree to take part in the group/study cannot be used, as there was no consent sought to include this information.

Additionally, we highlighted some of the challenges which would be important to consider as factors for feasibility and acceptability, though some of these will be most relevant to the process of a research study as opposed to a clinical intervention.

Challenges – Phase 1

There have been a number of challenges to date.

Ethical Approval and Recruitment:

As this project is focused on a particular timepoint in the adolescent journey, this added some pressure to achieving ethical approval from the Research Ethics Committee by a certain point. Moreover, as the research is taking place at a time of considerable organisational change in CHI, more time was spent ensuring data protection and storage was designed in a way that factored in these changes. Once ethical approval was gained, there was a smaller window of opportunity for recruitment.

Location of Group:

The location and timing of the group intervention presented their own challenges. Location was critical as participants were to be recruited from 3 different geographical sites (though all part of CHI) and, subsequently, was likely to suit some but not all potential participants.

Timing of the Group:

Choosing a time and date for the group was a challenge as at the end of the academic school year, and especially the end of 6th class in Primary school can be a busy time for families. As such, whilst recruitment was possible for some, one of the main difficulties for families was consistent attendance, which was perhaps reflected in the fluctuation in attendance over the weeks.

Data Storage:

Due to ongoing changes from paper to electronic records as per current HSE guidelines, CHI is currently navigating a new way of storing data. This has delayed some final decisions on practices around data storage. We collaborated with the IT department and the Quality and Regulatory department for research, within CHI, to come up with the most reasonable and compliant ways of approaching this, with participant data confidentiality and Good Clinical Practice (GCP) at the forefront.

Next Steps:

Phase 2 of the intervention will begin late August/early September as our adolescent participants begin Secondary school and start attending their routine Diabetes Clinic Appointments. Coordination between the administrative staff booking the appointments and the research team, to ensure the psychologist is on hand for follow-up in these appointments, will be crucial.

Final data collection is estimated to take place in April/May of 2027 when participants attend their final appointment during their 1st year.

Anonymisation of data will take place after final data collection and , and it will no longer be possible to exclude participants from the study after this.

References:

Alho, I., Lappalainen, P., Muotka, J., Lappalainen,R. (2022). Acceptance and commitment therapy group intervention for adolescents with type 1 diabetes: A randomized controlled trial. Journal of Contextual Behavioral Science, 25, p 153-161. ISSN 2212-1447.

Delamater, A.M., et al (2018). ISPAD Clinical Practice Consensus Guidelines 2018: Psychological care of children and adolescents with type 1 Diabetes, Pediatr. Diabetes, 2018,

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