The Evaluation Study of a Novel E-Mentoring Programme Designed to improve the Psychological Management and Blood Glucose Control of Teenage Type One Diabetics

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Background:
- Around 10% of Type One Diabetic individuals in the UK are below the age of 19.
- The most common age of diagnosis is 12 years old, corresponding with psychological, hormonal and social changes that naturally transpire at this time (Silverstein et al., 2005).
- Teenagers demonstrate deterioration in effective metabolic control, attributed to withdrawal from efficient type 1 diabetes self management and restrictive self-care regimens.
- Poor glucose control in adolescence correlates to increased level of diabetes related complications such as nerve and kidney damage.
- Previous mentor-directed diabetes support resulted in improved blood glucose control, well-being and greater Quality of Life (Grey, et al. 2013).
- We believed that specific psycho-directed diabetes education with peer interaction could provide a more effective way to decrease Diabetes Related Distress.

The E-Mentoring programme: (Figure 1)
- Developed by researchers in collaboration with the Diabetes Clinic at Worcestershire Royal Hospital.
- Designed to improve psychological management and blood sugar control of adolescent T1Ds.
- Directed by a 20 year old type one diabetic.
- Facilities communication with other diabetics, via videos and chatrooms.

Results:
Researchers compared responses of level 1 or 2 rank to ‘The online page is engaging’ to rankings for other areas of programme design (Figure 3). This was repeated for level 3 or 4 (no respondents voted for a level 5) (Figure 4).
Our results show a positive correlation between engagement and programme design. Therefore by achieving successful design, the target audience are more likely to engage in the E-Mentoring programme.
In addition, personalised videos were significantly preferred over website created videos (Figure 5).

Conclusion and Future Developments:
Areas to be maintained:
- Online format
- Personalised videos
- Chatrooms

Areas to be amended:
- Age sensitive material:
  - Sex
  - Drugs
  - Alcohol

Areas to be included:
- Interactive tools:
  - Quizzes
  - Interviews
  - Podcasts
- Short- and long-term goal setting

Objectives:
1. To highlight areas of strength and weakness in a novel psycho-educational E-mentoring programme for teenage type one diabetics (T1Ds).
2. Identify crucial amendments to the site prior to dissemination for the target audience.
3. Ensure the programme is engaging to enhanced desired outcomes – improved blood glucose control and psychological management.
4. Leading to better diabetes control and a lessening burden on the NHS.

Method:
Effective design is noted as a critical element to encourage engagement in a website or mobile application (Garet, 2016). An evaluation questionnaire was created to address elements of programme design that are predicted to be fundamental to encourage engagement in E-Mentoring (Figure 2).