THE FEASIBILTY AND ACCEPTABLITY OF A NARRATIVE THERAPY GROUP APPROACH FOR ADOLESCENTS WITH TYPE 1 DIABETES: A PILOT STUDY

VOLUME I

(VOLUME II bound separately)

VANESSA J. WATT

MA (Hons) MSc

Submitted in partial fulfilment of the requirements for the degree of Doctorate in Clinical Psychology (D Clin Psy)

Mental Health and Wellbeing

University of Glasgow

July 2012

University of Glasgow

Declaration of Originality Form

This form **must** be completed and signed and submitted with all assignments.

Please complete the information below (using BLOCK CAPITALS).

Name	VANESSA J. WATT
Student Number	0106508
Course Name	Doctorate in Clinical Psychology
Assignment Number/Name	Clinical Research Portfolio

An extract from the University's Statement on Plagiarism is provided overleaf. Please read carefully THEN read and sign the declaration below.

I confirm that this assignment is my own work and that I have:

Read and understood the guidance on plagiarism in the Doctorate in Clinical Psychology Programme Handbook, including the University of Glasgow Statement on Plagiarism	☑
Clearly referenced, in both the text and the bibliography or references, **all sources** used in the work	☑
Fully referenced (including page numbers) and used inverted commas for **all text quoted** from books, journals, web etc. (Please check the section on referencing in the 'Guide to Writing Essays & Reports' appendix of the Graduate School Research Training Programme handbook.)	☑
Provided the sources for all tables, figures, data etc. that are not my own work	☑
Not made use of the work of any other student(s) past or present without acknowledgement. This includes any of my own work, that has been previously, or concurrently, submitted for assessment, either at this or any other educational institution, including school (see overleaf at 31.2)	☑
Not sought or used the services of any professional agencies to produce this work	☑
In addition, I understand that any false claim in respect of this work will result in disciplinary action in accordance with University regulations	☑

DECLARATION:

I am aware of and understand the University's policy on plagiarism and I certify that this assignment is my own work, except where indicated by referencing, and that I have followed the good academic practices noted above

Signed V. Watt

Acknowledgments

I would like to say a big thank you to Dr Sarah Wilson for her on-going support and encouragement in completing this thesis. I am also grateful for the support from Dr Liz Hunter and Gavin Allison from Yorkhill Children's Hospital who have been involved from day one! I would especially like to thank all of the adolescents who took part in this research study, without you this thesis could not have been written.

I would like to take this opportunity to say a massive thank you to all of my supervisors who have seen me through the past three years working in NHS Ayrshire and Arran. I have been massively lucky to have worked with such wonderful, encouraging and inspirational Clinical Psychologists who have supported me each step of the way.

I would also like to say a big thank you to all of my classmates. I have been lucky to have met such a wonderful mix of people who I hope to keep in touch with long into the future. In particular, I wanted to say thank you to Amy Best, Sinead O'loughlin and Jenny Whittaker for always being there with words of wisdom, cups of coffee, slices of cake and the odd glass of wine!

I could not complete this acknowledgment section without letting my parents know just how much I love them and letting them know how much I appreciate all the support they have given me throughout my life. You are two extremely special people and I am massively lucky to have you as my parents-I really could not have got to where I am without you both!!

And finally to the most special man in my life, Dave, thank you for being such a pillar of strength and for all your positivity, patience and encouragement. I am very lucky to have such a wonderful person by my side. I love you with all of my heart. Thank You.

VOLUME I - TABLE OF CONTENTS **Page Numbers**

Chapter One: SYSTEMATIC LITERATURE REVIEW **4 - 39**

Motivational Interviewing in Diabetes: A systematic literature review

Chapter Two: MAJOR RESEARCH PROJECT **40 - 74**

The feasibility and acceptability of a narrative therapy group approach for adolescents with type 1 diabetes: a pilot study

Chapter Three: ADVANCED CLINICAL PRACTICE I **75 – 76**

Critical Reflective Account (abstract only)

The meaning of becoming a 'specialist trainee': A journey of professional and personal development

Chapter Four: ADVANCED CLINICAL PRACTICE II **77-78**

Critical Reflective Account (abstract only)

Finding my role within a CAMHS team

APPENDICIES

Systematic Review **79 - 86**

Appendix 1.1 Authors Guidelines (Diabetes Research and Clinical Practice)

Appendix 1.2 Data Extraction Form

Appendix 1.3 Quality Assessment Criteria Checklist

Major Research Project **87-125**

Appendix 2.1 Author Guidelines (British Journal of Health Psychology)

Appendix 2.2 Ethical Approval letters

Appendix 2.3 Participant Information Sheet

VOLUME I - TABLE OF CONTENTS **Page Numbers**

Major Research Project continued… **87- 125**

Appendix 2.4 Parent/Guardian Information Sheet

Appendix 2.5 Participant Opt-In form

Appendix 2.6 Participant Consent Form

Appendix 2.7 Parent/Guardian Consent Form

Appendix 2.8 Experienced Patient Information Sheet

Appendix 2.9 Experienced Patient Opt-In Form

Appendix 2.10 Experienced Patient Consent Form

Appendix 2.11 Problem Areas in Diabetes-Teen Version

Appendix 2.12 Self-Efficacy in Diabetes Scale

Appendix 2.13 Individual outcome graphs pre- and post- intervention

Appendix 2.14 Semi-structured interview schedule

Appendix 2.15 Interview Extract and coding

Appendix 2.16 Major Research Proposal

CHAPTER ONE: SYSTEMATIC REVIEW

MOTIVATIONAL INTERVIEWING IN DIABETES: A SYSTEMATIC LITERATURE REVIEW

Vanessa Watt *

*Address for correspondence

Mental Health and Wellbeing

Gartnavel Royal Hospital

1055 Great Western Rd

Glasgow

G12 0XH

E-mail: v.watt.1@research.gla.ac.uk

KEYWORDS: diabetes, motivational interviewing, systematic review

Written in accordance with the requirements for submission to Diabetes Research and Clinical Practice (Appendix 1.1)

Abstract

Aims: This systematic review aims to evaluate the current evidence base for the use of Motivational Interviewing (MI) for individuals with diabetes.

Methods: A systematic search strategy was undertaken to identify studies which investigated the effects of MI on glycaemic control in individuals with diabetes. The articles were then screened using *a priori* inclusion criteria, which resulted in a total of 12 studies being included within the review.

Results: Motivational Interviewing was found to be superior in improving glycaemic control than a comparison/control group in some, but not all, of the included studies. In those studies which reported beneficial effects of MI, effect sizes ranged from 0.06 to 0.49 which would be considered small.

However, when MI was compared to educational interventions, more favourable results were found in the latter group. Indeed, the greatest effect size was reported for structured diabetes education (SDE) which demonstrated a larger effect on improving glycaemic control compared to a MI intervention.

Conclusions: The results of this review provide a somewhat mixed picture and at this stage it would not appear that MI consistently offers superior outcomes when compared with usual care or other comparator approaches. However, this review has highlighted the need to explore the application of this approach for individuals aged 18-50 and consider whether there are any differences in outcomes for those with type 1 (T1D) or type 2 (T2D) diabetes.

Introduction

Diabetes is a common metabolic condition, which has been estimated to affect 2.9 million people within the UK, equating to approximately 4.4% of the overall population [1].

Diabetes occurs when the body is either unable to produce insulin (T1D) or is unable to effectively use the insulin it generates (T2D). As insulin is required to help the body breakdown glucose, this condition can result in individuals experiencing hyperglycaemia (raised blood sugar levels), which can over time lead to additional health complications including heart disease, stroke, blindness, kidney disease and nerve damage [2].

In order to achieve optimal glycaemic control, individuals with T1D must regularly check their blood glucose levels, administer insulin injections and monitor their diet and physical activity [2]. In contrast, T2D is often associated with obesity [3] and therefore individuals diagnosed with T2D are encouraged to reduce their weight, eat a more balanced diet and engage in more exercise. In addition, those with T2D diabetes may be required to take insulin injections or control their condition with the use of oral medications. Therefore, it is necessary to investigate which interventions encourage diabetics to adhere to the lifestyle changes that are required to successfully self-manage their diabetes. This is particularly important in those who are struggling to control their blood sugar levels who will be at greater risk to additional health complications in later life.

Moreover, research in this area has also highlighted that many individuals with diabetes are at increased risk of psychological difficulties [4, 5]. It is therefore important to consider which interventions may positively affect individual's psychological wellbeing and promote resilience in the face of this chronic health condition. Hence, national guidelines recommend that psychological interventions should be offered to children and adults with T1D and T2D. This includes the use of cognitive behavioural therapy (CBT), goal setting skills and motivational interviewing (MI) [6]. It has, however, been argued that the evidence for the

impact of psychological interventions on diabetes care is limited and further research is required [7].

Motivational Interviewing has gained increasing interest within the academic and clinical field over the past 10 years as a short-term intervention, which could potentially help to improve a range of outcomes in individuals diagnosed with diabetes. Motivational Interviewing is defined as a “directive method for enhancing intrinsic motivation to change by exploring and resolving ambivalence” [8]. There are four key guiding principles that underpin MI: (i) express empathy, (ii) roll with resistance, (iii) develop discrepancy and (iv) support self-efficacy. Alongside these, Miller and Rollnick [8] describe the importance of the MI “spirit” which has its roots in Rogerian psychotherapy. The “spirit” consists of three essential components which help to guide the therapy: 1) collaborate with and empower the individual you are working with, 2) support and respect the individual’s autonomy and their potential to solve their own problems, and 3) develop an intrinsic motivation for change by helping to elicit change talk from the individual. Motivational Interviewing draws on existing concepts and techniques from behaviour change theories including: Cognitive Dissonance theory [9]; Self-Perception theory [10] and the Transtheoretical Stages of Change Model [11].

Since the first clinical description of MI in the 1980s, research and applications of this approach have increased rapidly. Whilst MI was initially applied to individuals with alcohol problems, it has since been used to address drug abuse, gambling, chronic disease management, health related behaviours and eating and anxiety disorders [12].

Numerous studies have investigated the efficacy of MI. Hettema et al. [13] conducted a meta-analysis across 72 studies which had used MI interventions in the areas of alcohol abuse, smoking, HIV/AIDS, drug abuse, treatment compliance, gambling, intimate relationships, water purification/safety, eating disorders, diet and exercise. The average short-term between-group treatment effect size was 0.77, which diminished over time to 0.30 with the strongest support found for interventions used in the treatment of alcohol and drug

abuse. The authors identified that there was large variability across studies and therefore suggested that further research was needed to clarify the specific variables which increase or decrease the effectiveness of MI interventions. An additional review which investigated the effects of MI for weight loss concluded that the approach was effective in improving diet, exercise behaviours, regimen adherence and weight loss in individuals with obesity, pre-diabetes and T2D [14]. The author, however, emphasised the need for further research to be completed in order to determine whether MI performs better as a stand-alone treatment or if its effects are greater when combined as an adjunct to other treatment packages.

At the time of writing this review, there have been no published systematic reviews that have investigated the effects of MI solely with individuals with diabetes. As there has been a number of recent research studies published in this area, it appears timely to collate these research findings to determine the likely efficacy of this approach within this population.

Objectives

This systematic review aims to evaluate the current evidence base for the use of MI with individuals with diabetes. The review will address a number of key objectives based on the Scottish Intercollegiate Guideline Network Guidelines (SIGN, 50) [15]. The review will address the following questions:

- *Population*: Who are the population being targeted with this approach?
- *Intervention*: What is the format, content and duration of the intervention provided? Who is providing the MI intervention and what training have they undertaken?
- *Comparators*: What is MI being compared to?
- *Outcomes*: What outcomes are being measured? Where are the most significant changes seen?

- *Study design*: What is the quality of the research being carried out in this area? Are there gaps in the research?

Method

Data sources and searches

A systematic search of the literature was completed on the 11th February 2012. Any further literature published after this date was not included within the review. The following databases were systematically searched: OVID Medline (1946-2012), OVID Embase (1974-2012), CINHAL (1980-2012), PsycINFO (1980-2012), Psychology and Behavioural Sciences Collection (1980-2012), Web of Science (1898-2012) and Science Direct (1980-2012). Text word searches were completed using terms relating to diabetes, motivational interviewing and intervention studies. The results of the searches were combined using the Boolean operators "AND" and "OR".

Inclusion criteria

All studies identified from the database searches were screened against inclusion and exclusion criteria which are presented below.

Inclusion criteria

- Diagnosis of diabetes (T1D or T2D)
- Quantitative research design
- Use of "motivational interviewing" within the title or abstract
- Intervention studies where motivational interviewing was compared with a control group or another intervention approach
- Studies which recorded a measure of glycaemic control as one of the outcomes

- Studies published in English

Exclusion criteria

- Research not published in English
- Qualitative research studies
- Studies where not all participants have a diagnosis of diabetes
- Studies which report only baseline data
- Study protocols
- Studies relating to the prevention of diabetes
- Studies that do not report a measure of glycaemic control as an outcome measure

Data extraction and quality assessment

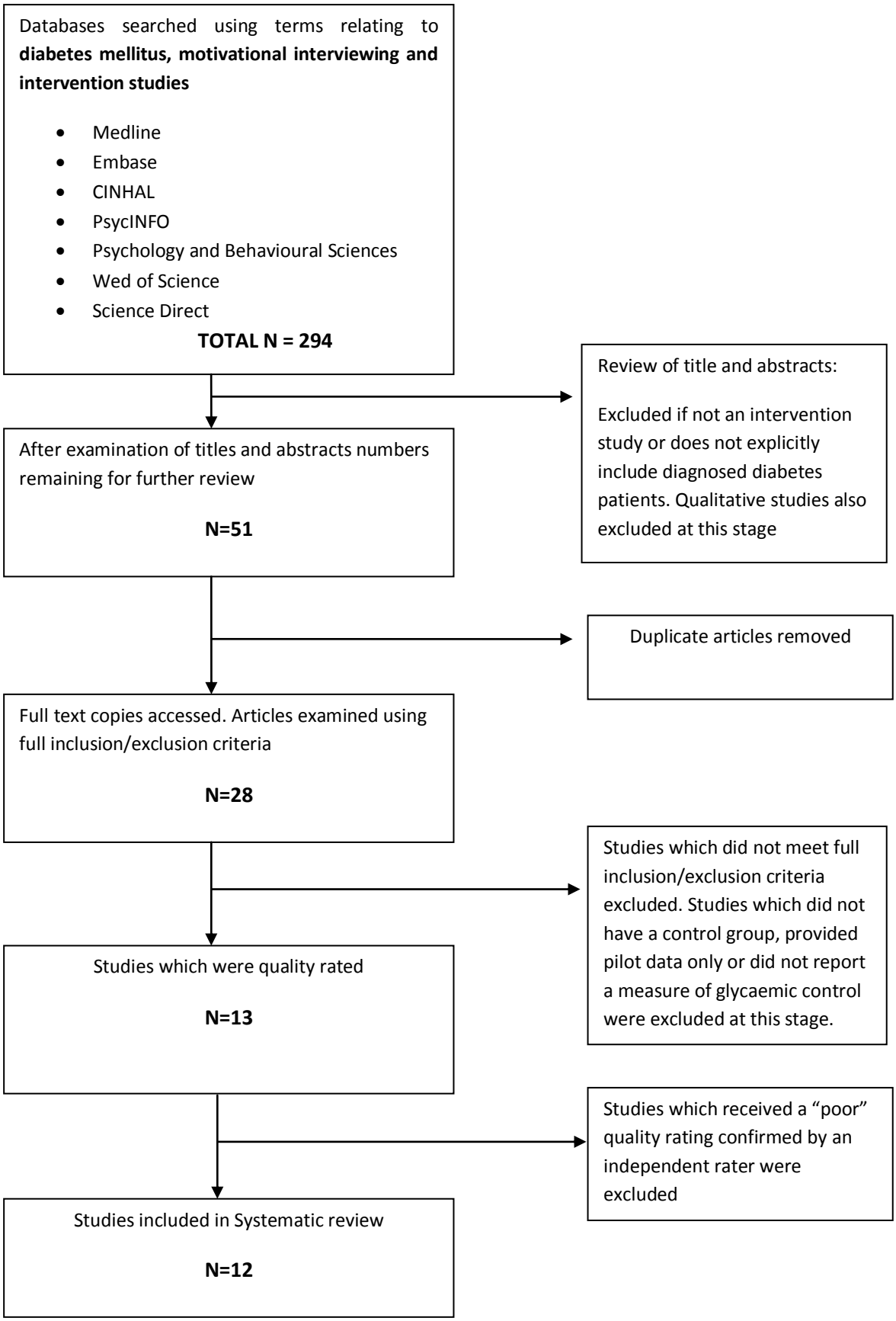
Data was extracted for all the studies which met inclusion criteria using a data extraction form (Appendix 1.2). These studies were then rated using a quality assessment tool (Appendix 1.3). The tool was constructed using recognised quality guidelines: Consolidated Standards of Reporting Trials (CONSORT) [16], SIGN 50 guidelines [15] and Downs and Black [17]. The tool consists of five sections: aims/objectives, introduction, methods, results and discussion. Following quality rating, studies were coded as Good (>75%), Moderate (50-75%) or Poor (<50%).

Fifty percent of the studies were randomly selected for independent review by another researcher using the same checklist. There was 100% agreement between raters for the assignment of papers to quality rating categories.

Results of search strategy

The search generated a total of 294 articles. The titles and abstracts of each of these were reviewed against the inclusion criteria. After removing articles that did not meet the inclusion criteria, a total of 51 articles remained. Following this, duplicates were removed leaving a total of 28 articles for review. Of the 28 articles accessed in full, a total of 13 articles met full inclusion criteria and underwent quality rating [18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30]. Subsequently, one article was excluded after it received an overall rating of “poor” by both the author and the independent rater [24] leaving a total of 12 articles. Figure 1 illustrates the outcome of the search process.

Figure 1: Flow chart of review process and study inclusion/exclusion criteria



Quality of included studies

Of the remaining 12 studies, 50% were rated as high quality [19, 21, 22, 23, 25, 30] and 50% were rated as moderate quality [18, 20, 26, 27, 28, 29].

Results

Description of included studies

The characteristics of the studies included in the review are displayed within Table 1 as recommended by the Higgins et al. [31].

[Insert Table 1 here]

Population

Age

Of the 12 studies included within this review, nine evaluated the effect of an MI intervention for adults over the age of 50 [18, 19, 22, 23, 25, 26, 27, 29, 30] whilst the remaining three studies considered the effects of MI for adolescents [20, 21, 28].

Type of diabetes

Seven of the 12 articles involved participants with a diagnosis of T2D [19, 22 23, 26, 27, 29, 30]; two studies included participants with T1D [21, 28] and one study used participants with a diagnosis of both T1D and T2D [25]. The two remaining studies did not specify the diagnosis of the participants within their study [18, 20].

Gender

Eight of the studies included both male and female participants [19, 21, 22, 23, 25, 26, 28, 29], whilst two studies included only women in their samples [27, 30]. Two of the published studies did not specify the gender of the participants included [18, 20].

Ethnicity

Fifty percent of the studies reported the ethnicity of the participants in their sample [21, 22, 27, 28, 29, 30]. In five of these studies the highest ethnic group represented was Caucasian, followed by Black and Hispanic [21, 27, 28, 29, 30]. Within the additional study, participants from Black ethnic origin made up the majority of the sample [22]. The remaining articles did not report the ethnicity of the participant's within their study [18, 19, 20, 23, 25, 26].

Country from which research was conducted

Five of the included articles were conducted in the United States of America [22, 27, 28, 29, 30], two were carried out in the UK [20, 21] two in Denmark [25, 26], two in Holland [18, 23] and the remaining study was completed in Taiwan [19].

Intervention

Study design

Eleven of the included studies were randomised controlled trials whilst the remaining article was a pilot pre-post intervention study [20].

Duration

There was a considerable variation in the number of MI sessions offered and the duration of each session. This ranged from a one-off session of up to 60 min [19] to a total of 15 sessions lasting approximately 15 min each, over a period of six months [22]. In many of the studies it was difficult to ascertain the exact number and duration of the MI sessions that were delivered [18, 20, 21, 27, 28]. Within two of the studies the authors allowed the participants to decide on the frequency and location of appointments. The average number of sessions for both of these studies was four with a range between one and nine contacts [20, 21]. An additional study outlined the number of sessions offered to their intervention group however, did not outline the duration of these contacts [27]. Within two of the studies,

the authors reported that participants received a different number of contacts with the health professional but did not appear to account for this in the results [18, 28]. Overall, the number and duration of the MI session offered varied considerably both between and within the studies.

MI deliverers

The MI interventions were facilitated by a range of professionals including nurses, dietitians, physiotherapists, psychologists, general practitioners (GPs), diabetes educators and researchers. Four of the studies exclusively used nurses as facilitators [19, 21, 22, 23], two studies used clinical psychologists [27, 30], two were led by diabetes educators [28, 29], one by dietitians [18], one by GPs [26], one by a researcher [20] and the remaining study used a range of health care professionals to deliver the MI intervention [25].

MI protocol

Three of the studies reported the use of a treatment protocol for the MI intervention [25, 28, 29]. Six studies did not specify using a treatment protocol [18, 19, 20, 21, 27] and the remaining three studies indicated that a protocol may have been followed, however no specific details were provided which would allow replication [22, 23, 30].

MI training

Seven of the 12 studies provided clear details on what training the MI facilitators had undertaken [18, 20, 23, 25, 26, 28, 29]. The remaining five studies reported the profession of the MI interventionist, however, it was unclear what specific training they had undertaken [19, 21, 22, 27, 30].

The training received by the MI interventionists varied somewhat between the studies. The most common duration of training received was two days with a variety of follow-up support being offered. This support was provided in the form of individual supervision, peer support,

group conference calls and skill refresher sessions. The maximum duration of training was reported to be five days theoretical training followed by three practical coaching sessions, every three months for 18 months [25].

Treatment fidelity

Nine of the research studies reported the way in which treatment fidelity was measured [18, 20, 21, 22, 23, 25, 28, 29, 30]. Four of these studies utilised the MI Treatment Integrity System (MITI), which is a behavioural coding system designed to measure treatment fidelity for MI [18, 25, 28, 29]. The other studies described audio recording a selection of the therapy sessions and providing either oral or written feedback via supervision or an external trainer.

The remaining three studies did not report how treatment fidelity was measured [19, 26, 27]. Indeed, within one of these studies it was reported that there may have been a contamination effect between the MI interventionists and the control interventionists and this could have influenced the results [26].

Confounding variables

When reviewing the literature it is important to consider any additional confounding variables that could have influenced the overall results. In two studies it was observed that participants could be referred for additional support if required [19, 25]. The authors acknowledged this within the methods section and described briefly what this could involve; either educational sessions, peer support through a “diabetes club” or individual counselling in relation to diet, smoking, alcohol or exercise [25]. The authors, however, do not take this into account when comparing the effects of the MI intervention and the control group.

Alongside this, another study provided all participants with access to a web-based education programme that aimed to support self-management. This was offered to both the experimental and control group as a voluntary adjunct to their treatment. The focus of this

programme was to support self-reflection, goal-setting problem solving and active patient participation [23]. The potential effect this could have had on outcomes for both groups was not taken into account during analysis or addressed in discussion.

Comparators

How is MI being offered?

Six of the studies compared MI interventions to treatment as usual (TAU) [18, 19, 20, 23, 25, 26], which consisted of attending their routine appointments with clinic staff, GPs or dietitians.

The MI interventions were often included as an adjunct to another form of treatment. For example, in Smith et al. [27] and West et al. [30], individuals in both groups participated in a group intervention based on a behavioural weight control program. Following this, participants either received individual MI sessions (intervention group) or were randomised to the control group and received no further intervention.

Welch et al. [29] compared diabetes self-management education including MI to diabetes self-management education alone in order to determine whether the addition of the MI sessions would promote better outcomes. Furthermore, Wang et al. [28] compared MI to a structured diabetes education programme to determine which approach would be most effective for adolescents with T1D.

The remaining two articles included a comparator group in order to compare the effects of an MI intervention to another form of contact with health professionals. Channon et al. [21] offered the control group non-directive psychological support, information and education as a comparator to the MI intervention. Hawkins [22] provided videophone contacts on a monthly basis to the control group, who were able to discuss six different hand-outs from a healthy lifestyle pack.

Outcomes

A summary of the key outcomes in provided within Table 2.

[Insert Table 2 Here]

Glycaemic control

All of the studies included within this review investigated the effect of an MI intervention on glycaemic control. This was measured by HbA1c [18, 19, 20, 22, 23, 25, 26, 29], A1C [21, 28, 30] or %GHb [27].

Six of the studies reported better outcomes for glycaemic control for the MI group compared to the comparison group [19, 20, 21, 22, 27, 30]. Four of the studies reported no significant differences between MI and control groups [18, 23, 25, 26] and two of the studies reported more favourable results for the comparator group than for the MI intervention group [28, 29].

Of the studies indicating positive outcomes for MI, two compared MI to TAU, [19, 20], three provided contact with a health professional which took the form of discussion of health related topics, education/information sharing and overall non-directive support (averaging 5-6 contacts) [21, 22, 30]. The final study offered both groups a 16 week behavioural weight control programme following which the MI group were offered three additional individual sessions whilst the control group were not offered any additional intervention [27].

It is worth noting that the two studies which showed more favourable results for the control group had provided structured diabetes education sessions as the comparator to MI [28, 29]. This was either diabetes self-management education (DSME) or structured diabetes education (SDE).

Lifestyle/clinical outcomes

Seven of the 12 studies recorded additional lifestyle/clinical outcomes [18, 22, 23, 25, 26, 27, 30]. These included body mass index (BMI), waist circumference, cholesterol, blood pressure as well as information on saturated fat intake, fruit and vegetable intake and physical activity.

Overall, all of the studies reported that there was no difference between groups for the majority of the measures recorded. One of the studies, however, reported that the MI group showed a significantly lower saturated fat intake at post-test compared to the control group [18]; but another study reported that saturated fat intake was reduced in the control group but not in the MI group [23]. Another of the studies reported that the MI group showed greater weight loss than controls at each visit [30]; however, both groups showed weight loss from baseline to follow-up.

Psychosocial outcomes

Eight of the 12 studies also reported psychosocial outcomes following the intervention. There were an array of measures used across the studies to consider the effect of MI on diabetes-related distress, perceived competence in managing diabetes, fear of hypoglycaemia, health locus of control, diabetes-related quality of life, depression, diabetes self-care, wellbeing, family behaviours and diabetes knowledge. Up to eight different psychosocial measures were used within an individual study [21].

Two of the studies reported greater improvement in self-efficacy in the MI group compared to controls [19, 22]. Further benefits of MI were reported for quality of life (QoL) [19, 21], knowledge of diabetes [22], health locus of control [23], reduction in fear of hypoglycaemia [20], worry and anxiety [21] and perceived competence in dealing with diabetes [25].

Whilst there were areas in which the benefits of MI were reported on psychosocial measures, a number of studies reported no significant differences between groups for depression,

anxiety and stress [19], wellbeing, family behaviours or diabetes knowledge [20] or in diabetes-related distress [23, 25].

No differences were observed between groups in one of the studies [28] who investigated the effect of MI on depression, QoL and diabetes self-care activities.

Effect size

Effect sizes were calculated for eight of the included studies [18, 19, 20, 21, 22, 27, 28, 30]. The remaining four studies did not provide adequate data to enable an effect size calculation to be completed [23, 24, 25, 26]. Where beneficial effects of MI were reported, effect sizes ranged from 0.06 [20] to 0.49 [22], indicating small effect sizes. In the studies reporting superior outcomes for the control group, only one effect size was calculable and was found to be 0.67, indicating a moderate effect [28].

Outcomes defined by diagnosis

T1D

Two studies investigated the effects of MI for adolescents with T1D [21, 28]. Channon et al. [21] reported positive effects of an MI intervention on glycaemic control when compared to non-directive psychological support. These improvements were maintained at 24 months. In addition, significant differences between groups for wellbeing, QoL and anxiety were noted, in favour of the MI group.

In contrast to these promising results for MI, Wang et al. [28] found no differences between groups for any of the psychosocial outcomes measured and showed a greater effect of the control condition (SDE) on glycaemic control compared to the MI intervention.

T2D

The majority of studies included within this review investigated the effects of MI for individuals with T2D. Seven of the articles specifically included individuals with T2D with a mean age between 53 and 66 years. Of these studies, four reported significant improvements in glycaemic control in the MI group which were not equalled by the control group [19, 22, 27, 30]. Two of the studies were unable to demonstrate any superior advantage of MI over the control group [23, 26] and one study demonstrated a greater improvement in glycaemic control in the control group compared to the MI group [29].

T1D and T2D

Rosenbek-Minet et al. [25] recruited participants with a diagnosis of T1D and T2D to their study. Overall, a greater number of individuals with type 2 diabetes were included (78% vs 22%). The authors reported no superior effect of an MI intervention compared to usual care, on measures of glycaemic control, body mass, waist circumference, blood pressure, cholesterol or diabetes related distress. The only significant difference was found in relation to perceived competence in dealing with diabetes in favour of the MI group at 12 month follow-up. The authors did not analyse the results separately by diagnosis and therefore it is unclear whether there was a similar pattern for those with T1D and those with T2D.

Discussion

Overall findings

This review aimed to evaluate the current evidence base for the use of MI with individuals with diabetes. Overall, a mixed picture emerged. Motivational Interviewing was found to be superior in improving glycaemic control than a comparison/control group in some [19, 20, 21, 22, 27, 30], but not all of the included studies [18, 23, 25, 26, 28, 29].

Of the studies reporting beneficial effects of MI, two provided an MI intervention to adolescents with T1D [20, 21] and the other four utilised the approach with adults with T2D [19, 22, 27, 30]. The effect size of the improvements of these studies ranged from 0.06 [20] to 0.49 [22] which would be considered as small.

The two studies which compared MI to an educational programme found more favourable results for glycaemic control within the latter group [28, 29]. It may be that when compared with educational interventions, MI is unable to match the improvements seen within these structured approaches. The study which offered an educational intervention either with or without MI revealed more positive results for the group who received the educational intervention only. Interestingly, the results suggested that adding MI as an adjunct to education does not promote better outcomes in this population. Therefore, it may be that structured education is a more effective intervention for improving glycaemic control than MI.

The four studies which were unable to report any superior benefit of MI over the control group all compared MI with TAU [18, 23, 25, 26]. The results from these studies would suggest that MI offers no significant benefit in helping to improve glycaemic control in individuals with diabetes when compared to TAU.

In addition, the studies included in the review were unable to provide consistent evidence that MI could produce positive effects on psychosocial outcomes. Whilst some improvements were noted in the areas of self-efficacy [19, 22], QoL [19, 21], knowledge of diabetes [22, 23], locus of control [23], fear of hypoglycaemia [20], worry and anxiety [21] and competence in dealing with diabetes [25], these improvements were not consistent across studies and overall the majority of studies were unable to endorse the benefits of MI across the wide range of psychosocial outcomes measured.

Furthermore, there was little evidence to suggest that the MI approach was beneficial in improving lifestyle/clinical outcomes. Although a reduction in saturated fat intake was

reported in one study [18], it is widely acknowledged that self-report measures of dietary intake are open to bias and therefore the accuracy of this outcome measure should be treated with caution. However, one study was able to demonstrate a greater improvement in weight loss in the MI intervention group compared to the control group [30].

Methodological limitations of the evidence

Sample size

Of the studies included within the review, eight had completed a power calculation in order to determine sample size [18, 19, 21, 22, 23, 25, 26, 29]. One of these studies was unable to recruit sufficient participants which limited the overall conclusions that could be made [25]. Without the assurance of having completed a power calculation the results of any comparison between groups needs would need to be interpreted with caution.

Dropout rates

Participant dropout rates within some of the studies were high (e.g. 35% [18], 26% [29]) and although no differences in the dropout rates of the MI and the control group were observed [18], this may have impacted on the overall follow-up data.

Glycaemic control at baseline

Whilst it would be assumed that MI interventions would be targeting individuals who were struggling to manage their diabetes, three of the studies had included participants who had adequate or good glycaemic control at baseline [20, 23, 30]. The inclusion of participants who were already achieving satisfactory glycaemic control may have made it more difficult to observe a change over time. Furthermore, the appropriateness of using MI to target those already achieving good control may be questionable.

Confounding variables

As noted within the results section, several studies failed to account for potential confounding variables which could have influenced the validity of the results obtained [19, 23, 25]. The additional support options available to participants in these studies could have influenced the outcomes for both the MI and control groups. Therefore, it is difficult to conclude that it was solely the MI intervention influencing the outcomes and as a result the conclusions from these studies should be interpreted with caution.

Generalisability

The question of generalisability of the results remains an issue for consideration. Hawkins [22] targeted a specific niche population of older adults living in rural America where the majority of the sample were Black women who had been educated to high school level. Additionally, two further studies included only women with T2D [27, 30], making it hard to generalise the results across genders.

From the studies reviewed, the participants recruited were either adolescents [20, 21, 28] or adults over the age of 50 [18, 19, 22, 23, 25, 26, 27, 29, 30]. Thus little research appears to have been conducted on the impact of MI interventions of adults between the age of 18 and 50 with diabetes.

Further research in this area would help to provide further information on the impact of MI across the age range.

Outcome measures

It is worth noting that many of the research studies utilised a wide range of outcome measures in order to attempt to highlight the beneficial effects of MI. Not only is it more time consuming for participants and more difficult to complete the follow-up measures, there is also the concern that measures are being used without a clear rationale.

Limitations of the review

The present review used an extensive search strategy to identify all articles relevant to the review questions. Strict inclusion criteria were applied and only studies of moderate or high quality were included. Unpublished studies and those not written in English were excluded and this may therefore be a source of bias. Whilst ideally all of the included studies would have been independently quality rated, time constraints meant than only 50% of the articles underwent this process. Furthermore, the inclusion criteria for this review specified that studies must have included a measure of glycaemic control both pre- and post- intervention. As a result, a number of studies that focused only on psychosocial or additional lifestyle factors were excluded.

Conclusions and directions for future research

This systematic review aimed to evaluate the efficacy of using MI with individuals with diabetes. The results of the review provide a somewhat mixed picture, and at this stage it would not appear that MI consistently provides superior outcomes when compared to TAU or other treatment approaches. In the studies where MI was shown to be more effective in improving glycaemic control, the overall interaction effect sizes were small.

The results from this review are derived from studies investigating the effect of MI on adolescents under the age of 18 and in adults over the age of 50. There is a gap in the research literature with regard to the effects of MI on adults between ages of 18 and 50. Further research should consider this population and investigate the effects of the MI approach across the age range. There is much evidence of the growing 'epidemic' of diabetes which is beginning to affect individuals at a far younger age. A recent report by the British Broadcasting Corporation (BBC) indicated that it is younger people who are at most risk of long-term complications and stressed the difficulties this could cause for the National Health Service (NHS) if appropriate resources are not provided [32]. That being the case,

there is a need to focus research on this population in order to ensure that individuals of all ages are able to access the most appropriate interventions.

Whilst the treatment fidelity measures would support the delivery of MI by a range of health professionals, it will be important to continue to assess and measure treatment fidelity within the research studies in order to ensure that the "spirit" and skill requirements for MI are being adhered to. Whilst there is some debate as to how appropriate it is to manualise MI [13], there is scope for researchers and practitioners to utilise the MITI, which offers a behavioural coding system designed to measure treatment fidelity. In many ways this avoids having to create a manual, whilst also being able to claim that what is being offered is truly MI. Further research into the optimal content, duration and support offered in MI training would help inform the use of this approach in clinical practice and guide the training of other professionals.

The present review included articles involving participants with T1D and T2D. The results from this review were unable to specifically determine whether MI is more effective in T1D or T2D as the results were mixed. It would be useful for future research to consider whether there are any differences in the outcomes between these populations when other factors are controlled for.

Many of the studies utilised a wide range of questionnaires and collected a vast number of outcome measures. Whilst this can be useful in the first instance to try to identify where the effect of MI might lie, there is a need to identify which outcome measures are most likely to demonstrate the benefits of MI within this population. Furthermore, it is important that the researchers take into account these multiple comparisons and control for these in their statistical analysis.

In the light of recent government policies and service redesign, there is a move towards increasing access to psychological therapies [33]. Motivational Interviewing appears to be an

approach that is being adopted by a range of health professionals as a way to explore ambivalence and improve motivation in their patients with diabetes. As with any psychological approach, it is important that those delivering the intervention are provided with sufficient training and supervision to ensure that patients are being offered the most effective treatments. In addition, high quality research is required to tease out the active components of the approach and enhance our understanding of how MI should be implemented. However, Miller and Rollnick [34] express their concerns about the ways in which the approach has been open to 'reinvention' which has at times led to the therapy being offered in a way that no longer resembles the true essence of MI. They emphasise the need for a clear professional consensus on the boundaries and competencies of MI in order to ensure that patients are receiving the highest quality of care [34]. Further research in this area is required in order to address these concerns.

References

1. Quality and outcomes framework: delivering investment in General Practice. (http://www.nhsemployers.org/Aboutus/Publications/Documents/QOF_guidance_GMS_contract_2011_12.pdf) accessed on 18th May 2012.

2. Diabetes UK: Care. Connect. Campaign. What is diabetes? (http://www.diabetes.org.uk/) accessed on 18th May 2012.

3. World Health Organisation, Factsheet Number 312, Media Centre. (http://www.who.int/mediacentre/factsheets/fs312/en/) accessed on 10th May 2012.

4. Lloyd C, Dyer P, Barnett, A. Prevalence of symptoms of depression and anxiety in a diabetes clinic population. Diabet Med., 2001; 17 (3):198-202.

5. Dantzer C, Swendsen J, Maurice-Tison, S, Salamon, R. Anxiety and Depression in Juvenile Diabetes: A critical review. Clin Psychol Rev., 2003; 23 (6): 787-800.

6. Scottish Intercollegiate Guideline Network. Management of Diabetes: A National Clinical Guideline 116. (http://www.sign.ac.uk/pdf/sign116.pdf) accessed on 8th of May 2012.

7. Winkley K, Landau S, Ismail K. Psychological interventions to improve glycaemic control in patients with type 1 diabetes: a systematic review and meta-analysis of randomised controlled trials. BMJ., 2006; 333:65.

8. Miller W, Rollnick S. Motivational Interviewing (2nd ed) Guilford Press, New York, 2002.

9. Festinger L. A theory of Cognitive Dissonance. Stanford University Press, Chicago. 1957.

10. Bem D. Self-perception theory: Advances in Experimental Social Psychology, In Berkowitz, L (ed). Academic Press, New York, 1972.

11. Prochaska J, DiClemente C. Stages and processes of self-change of smoking: toward an integrative model of change. J Consult Clin Psychol., 1983; 51: 390-395.

12. Arkowitz H, Westra H, Miller W, Rollnick, S. Motivational interviewing in the treatment of psychological problems. Guilford Press, New York, 2008.

13. Hettema J, Steele J, Miller W. Motivational Interviewing. Annu Rev Clin Psychol., 2005; 1: 91-111.

14. Van Dorsten B. The use of motivational interviewing in weight loss. Curr Diabetes Reports., 2007; 7: 386-390.

15 Scottish Intercollegiate Guideline Network 50: A guideline developer's handbook. Healthcare Improvement Scotland, 2011.

16 Schulz K, Altman D, Moher D. CONSORT 2010 Statement: updated guidelines for reporting parallel group randomised trials. BMJ., 2010; 340: 698-702.

17 Downs S, Black N. The feasibility of creating a checklist for the assessment of methodological quality both of randomised and non-randomised studies of health care interventions. J Epidemiol Community Health., 1998; 52: 377-384.

18 * Brug J, Spikmans F, Aartsen C, Bredveld B, Bes R, Fereira I. Training dieticians in basic motivational interviewing skills results in changes in their counselling style and in lower saturated fat intakes in their patients. J Nutr Educ Behav., 2007; 39: 8-12.

19 *Chen M, Creedy D, Lin, H, Wollin J. Effects of motivational interviewing intervention on self-management, psychological and glycaemic outcomes in type 2 diabetes: A randomised controlled trial. Int J Nurs Stud., 2012; 49 (6): 637-644.

20 *Channon S, Smith V, Gregory J. A pilot study of motivational interviewing in adolescents with diabetes. Arch Dis Child., 2003; 88: 680-683.

21 *Channon S, Huws-Thomas M, Rollnick S, Hood K, Cannings-John R, Rogers C et al. A multicentre randomised controlled trial of motivational interviewing in teenagers with diabetes. Diabetes Care., 2007; 30(6): 1390-1395.

22 *Hawkins S. Improving glycaemic control in older adults using a videophone motivational diabetes self-management intervention. Res Theory Nurs Pract., 2010; 24 (4): 217-232.

23 *Heinrich E, Candel M, Schaper N, de Vries N. Effect evaluation of a motivational interviewing based counselling strategy in diabetes care. Diabetes Res Clin Pract., 2010; 90(30): 270-278.

24 Pourisharif H, Babapour J, Zamani R, Besharat M, Mehryar A, Rajab A. The effectiveness of motivational interviewing in improving health outcomes in adults with type 2 diabetes. Procedia Social and Behavioural Sciences., 2010; 5: 1580-1584.

25 *Rosenbek-Minet L, Wagner L, Lonvig E, Hjelmborg J, Henriksen J. The effect of motivational interviewing on glycaemic control and perceived competence of diabetes self-management in patients with type 1 and type 2 diabetes mellitus after attending a group education programme: a randomised controlled trial. Diabetologia., 2011; 54: 1620-1629.

26 *Rubak S, Sandbaek A, Lauritzen T, Borch-Johnsen K, Christensen B. Effect of motivational interviewing on quality of care measures in screen detected type 2 diabetes patients: a one year follow-up of an RCT, ADDITION Denmark. Scand J Prim Health Care., 2011; 29: 92-98.

27 *Smith D, Heckemeyer C, Kratt, P, Mason D. Motivational Interviewing to improve adherence to a behavioural weight control program for older obese women with NIDDM: A pilot study. Diabetes Care., 1997; 20(1): 52-54.

28 *Wang Y, Stewart S, Mackenzie M, Nakonezny P, Edwards D, White P. A randomised controlled trial comparing motivational interviewing in education to structured diabetes education in teens with type 1 diabetes. Diabetes Care., 2010; 33 (8): 1741-1743.

29 *Welch G, Zagarins S, Feinberg R, Garb J. Motivational interviewing delivered by diabetes educators: does it improve blood glucose control among poorly controlled type 2 diabetes patients? Diabetes Res Clin Pract., 2011; 91(1): 54-60.

30 *West D, Dilillo V, Bursac Z, Gore S, Greene P. Motivational interviewing improves weight loss in women with type 2 diabetes. Diabetes Care., 2007; 30(5): 1081-1087.

31 Higgins J, Green S. Cochrane Handbook for Systematic Reviews of Interventions Version 5.1.0. The Cochrane Collaboration 2011. (www.cochrane-handbook.org) accessed on 18th May 2012.

32 BBC News Health, NHS faces diabetes time bomb. (http://www.bbc.co.uk/news/health-13928359) accessed on 5th of June 2012.

33 Layard, R. The Depression Report: A new deal for depression and anxiety disorders. The London School of Economics and Political Science. (http://eprints.lse.ac.uk/818/) accessed on 6th of June 2012.

34. Miller W, Rollnick S. Ten things that Motivational Interviewing is not. Behav Cogn Psychother., 2009; 37: 129-140.

Table 1. Description of studies included in the review

Authors	Design	Participants			Intervention				Comparator group	Outcomes
		Sample	Age (M)	Gender	Content	Duration	Delivery method	Deliverer		
Brug et al. (2007)	RCT	Diagnosis not reported *n* = 142	59	Not reported	3-4 counselling sessions in MI	1 x 45 min with additional 15 min sessions	INDV	Dieticians	Usual care 3-4 counselling sessions with dietician not trained in MI	HbA1c Saturated fat intake Vegetable intake Fruit intake BMI WC
Channon et al. (2003)	Pilot intervention study	Diagnosis not reported *n* = 22	16	Not reported	Content of MI sessions: Awareness building Alternatives Problem solving Making choices Goal setting Avoidance of confrontation	Participants decided on location and frequency of appointments over 6 month intervention phases. Mean number of visits (5)	INDV	Researcher	Usual care Did not receive MI intervention	HbA1c Wellbeing Diabetes knowledge Self-care behaviours Personal model of diabetes Family processes Management of diabetes in the family
Channon et al. (2007)	Multicentre RCT	T 1D *n* = 66	15 (I) 15 (C)	47% M 50% M	"Menu of strategies" to elicit patient views and explore discrepancies between beliefs and behaviour	Frequency and location decided by participant over 1 year (20-60 min) Mean number of visits = 4	INDV	Nurse training in health psychology	Non directive psychological support, information and education (every 6-8wks) Mean number of visits = 6	A1C Diabetes QoL Locus of control Autonomy Diabetes knowledge Self-efficacy Wellbeing Family behaviour Personal models of diabetes

Table 1 Continued…

Authors	Design	Participants			Intervention				Comparator group	Outcomes
		Sample	Age	Gender	Content	Duration	Delivery method	Deliverer		
Chen et al. (2011)	RCT	T 2D *n* = 215	59	50% M	MI intervention (Miller and Rollnick, 6 stage process)	45-60 min session x 1	INDV	Nurses	Usual care	HbA1c Self-management Self-efficacy QoL Depression/anxiety/ stress
Hawkins (2010)	RCT	T2D *n* = 66	64 (I) 66 (C)	5% M 4% M	Structured using the Diabetes self-management support intervention guide (DSMS)	Wkly 15 min x 12 wks Monthly 15 min x 3 months Total 6 months (15 sessions)	INDV via phone	Nurses	Attention control: Contacted monthly to discuss one of the 6 hand-outs from healthy lifestyle pack	HbA1c Diabetes knowledge Self-efficacy Clinical parameters
Heinrich et al. (2010)	RCT	T2D *n* = 584	59	55% M	MI counselling intervention designed to fit to diabetes care consultations. In addition, able to access web based education programme	Quarterly consultations x 20 min over 2yr	INDV	Nurses	Usual care with nurse who did not attend MI training. In addition, able to access web based education programme	HbA1c Self-management behaviours Clinical parameters Autonomy Health care climate Health locus of control Diabetes-specific QoL Diabetes related distress
Rosenbek Minet et al. (2011)	RCT	T1D &T2D *n* = 298	57 (I) 56 (C)	52% M 49% M	MI programme Semi-structured interview format of MI specifically developed for this intervention programme	5 counselling sessions lasting 45 min each at 1,3,6,9 and 12 months	INDV	Range of health care professions	Usual care Routine check-up at GP x 4 per year	HbA1c Diabetes related distress Clinical parameters Perceived competence for diabetes

Table 1 Continued...

Authors	Design	Participants			Intervention				Comparator group	Outcomes
		Sample	Mean age	Gender	Content	Duration	Delivery method	Deliverer		
Rubak et al. (2011)	RCT	T2D *n* = 628	61	58% M	Consultations with a GP trained in MI	Up to 3 consultations per patient up to 45 min each (mean 1.5)	INDV	GP trained in MI	Usual care Up to 3 consultations a year with a GP not trained in MI	HbA1c Diabetes self-care Physical activity Clinical parameters
Smith et al. (1997)	RCT Pilot study	T2D *n* = 22	62	0% M	16 weekly group meetings (behavioural weight control programme) plus 3 individual MI sessions	3 sessions (1 beginning and 2 mid treatment)	Mixed	Psych	16 weekly group meetings (behavioural weight control programme)-no MI sessions	GHb BMI Treatment adherence
Wang et al. (2010)	RCT	T1D *n* = 44	15 (I) 16 (C)	9% M 13% M	Manulised MI intervention-limited details on what this involved	2 intervention sessions (enrolment and 3-4 months later) Phone F/U were scheduled for 1 and 2 month with 3rd session scheduled if A1c remained > 9%	GROUP	Diabetes educators	SDE Medication Monitoring Acute complications Lifestyle	A1C QoL Depression Diabetes self-care

Table 1 Continued...

Authors	Design	Participants			Intervention				Comparator group	Outcomes
		Sample	Mean age	Gender	Content	Duration	Delivery method	Deliverer		
Welch et al. (2010)	RCT	T2D *n* = 234	56	41% M	MI intervention protocol combining MI and DSME	4 sessions over 6 months 1 x 60 min 3 x 30 min	INDV	Diabetes educators	DSME x 4 sessions over 6 months 1 x 60min 3 x 30min	HbA1c Diabetes related distress Self-care Diabetes treatment satisfaction Depression Self-efficacy
West et al. (2007)	RCT	T2D *n* = 217	53	0% M	All received an 18 month group based behavioural obesity treatment and then randomised to MI group, Individual sessions (x5)	18 month group based obesity treatment (42 sessions) plus 5 x 45 min sessions of MI or control	INDV	Clinical Psych	All received an 18 months group based behavioural obesity programme then randomised to Attention control group: Individual health education sessions (x5)	A1C BMI Treatment Adherence

M = male; I = intervention; C = control; RCT = randomised control trial; INDV = individual; BMI = body mass index; QoL = quality of life; T1D = type 1 diabetes mellitus; T2D = type 2 diabetes mellitus; MI = motivational interviewing; GP = general practitioner; SDE = structured diabetes education; CBGT = Cognitive behaviour group training; DSME = diabetes self-management education; GHb /A1C /HbA1c = Glycated Haemoglobin; F/U = Follow up; WC = waist circumference

Table 2 Outcomes of Intervention studies

Authors	Quality rating	Outcome measures			Summary of key findings	Effect size
		Glycaemic control	Lifestyle/clinical measures	Psychosocial outcomes		
Brug et al. (2007)	Moderate	Both MI and CG improved HbA1c from baseline-post-test No sig. group effect	BMI, WC and saturated fat intake improved for both groups from baseline to post-test MI group sig. lower sat fat intake at post-test than CG	_	MI group showed larger changes in their saturated fat scores than the CG No evidence that MI training resulted in larger changes in BMI, Glycaemic control, WC or fruit intake than the CG (usual care)	d= 0.21
Channon et al. (2003)	Moderate	Sig. improvement in HbA1c scores for MI group. No sig. improvement in HbA1c scores for CG	_	MI group showed sig. reduction in fear of hypoglycaemia and rated their diabetes as easier to live with No sig. changes on measures of wellbeing, diabetes self-care, family behaviours, family process or diabetes knowledge	MI may be useful in helping adolescents with T1D to improve glycaemic control and reduce their fear of hypoglycaemia. In addition, MI may help adolescents to perceive their diabetes as easier to live with	d=0.06
Channon et al. (2007)	Good	Sig. difference between MI group and CG in A1c scores which were maintained 12 months after completing intervention (in favour of MI group)	_	Sig. difference between groups for wellbeing, QoL and personal models of illness after 12 months. At 24 months sig. differences between two groups for life worry and anxiety (in favour of MI)	MI may be effective in working with teenagers with T1D, producing improvements in glycaemic control, psychological wellbeing and QoL	d=0.27
Chen (2011)	Good	Sig. change in MI group but not in CG for HbA1c from baseline to 3 month F/U. MI improved HbA1c for individuals with a baseline greater than 7.62	_	Sig. difference in self-efficacy and QoL in MI group but not in CG at 3 month F/U. Both groups scores for depression, anxiety and stress decreased. No sig. difference between groups at 3month F/U.	MI can produce improvements in patients with T2D in relation to glycaemic control, self-efficacy and QoL when compared to usual care	d=0.18

Table 2 Continued...

Authors	Quality rating	Outcome measures			Summary of key findings	Effect size
		Glycaemic control (HbA1C)	Lifestyle/clinical measures	Psychosocial outcomes		
Hawkins (2010)	Good	Sig. change in HbA1c from pre-post for MI group but not for CG	No sig. differences between groups for blood pressure, lipid panel or BMI	Both groups increased their knowledge about diabetes (only sig. in MI group) Sig. improvement in MI group for self-efficacy. No such improvement seen in CG.	The use of a videophone MI self-management intervention for older adults with T2D sig. improved measures of glycaemic control, diabetes knowledge and self-efficacy.	d=0.49
Heinrich et al. (2010)	Good	No effects of MI group on HbA1c measurements	Fat intake improved in CG but not MI group No effect on veg or fruit intake, physical activity, weigh or blood pressure	Sig. improvement in health locus of control and diabetes knowledge in MI group but not in CG	No advantageous effect of MI intervention for glycaemic control, weight, blood pressure or self-reported measures of fruit and veg intake and physical activity. The MI group however did show improvements in locus of control and knowledge.	_
Rosenbek Minet et al. (2011)	Good	No sig. difference between MI group and CG in change in HbA1c at 12 or 24 month F/U.	No sig. differences in weight, cholesterol, WC or blood pressure between MI group and CG	MI group showed sig. higher levels of perceived competence in dealing with diabetes at 12 months F/U compared to CG. However, this was not sustained at 24 month No sig. difference in diabetes related distress scores	No sig. changes were reported in HbA1c, diabetes distress or perceived competence in dealing with diabetes at 24 months F/U. In addition, no sig difference was found between groups for clinical measures of weight, cholesterol or WC, blood pressure. Authors are unable to demonstrate any benefit of MI over and above usual care	_
Rubak et al. (2011)	Moderate	Sig. improvement seen in both groups from 0 to 12 months. No sig. difference between groups	Improvements in both groups for BP, blood lipid measurements and BMI	_	Both groups showed improvements across a range of clinical and lifestyle measurements. There was however no sig. benefit of MI over usual care within this sample	_

Table 2 Continued...

Authors	Quality rating	Outcome measures			Summary of key findings	Effect size
		Glycaemic control (HbA1C)	Lifestyle/clinical measures	Psychosocial outcomes		
Smith et al. (1997)	Moderate	MI group showed sig. better glycaemic control than CG following intervention	Both groups lost weight-no sig. difference between groups	_	The addition of MI to a standard behavioural weight control program may enhance glycaemic control in patients with T2	d=0.42
Wang et al. (2010)	Moderate	At 6 months F/U the CG (SDE) had lower A1c than MI group	_	There were no differences between the groups on any of the psychosocial outcomes measured. No improvements were seen in either group	Structured diabetes education was effective in improving metabolic control in adolescents with T1D. The MI education group did not improve metabolic control. Neither group positively influenced psychosocial outcomes	d=0.67
Welch et al. (2010)	Moderate	Sig. changes in HbA1c were observed in both the MI group and the CG Those receiving MI had a sig. lower change score than those in the CG	_	None of the factors examined as potential mediators (depression, treatment satisfaction or perceptions of importance and self-efficacy regarding target self-care behaviours) were shown to affect HbA1c	The MI intervention was not found to be associated with improvements in HbA1c when compared to the non-MI condition. Mean change in glycaemic control was sig. better for the CG than the MI group	_
West et al. (2007)	Good	Glycaemic control improved in both MI group and CG (attention control) at 6 and 12 months. However, improvements not sustained at 18 months. Sig difference between groups in favour of MI	Both groups lost weight from baseline to F/U. MI group lost sig. more weight than CG at each visit	_	MI as a brief adjunct intervention sig. enhanced both weight loss and glycaemic control in overweight women with T2D	d=0.09

CG = control group; MI = motivational interviewing; F/U = follow-up; HbA1c/A1c = Glycated Hemoglobin, SDE = Structured Diabetes Education; QoL = quality of life; WC = waist circumference; T1D = type 1 diabetes mellitus; T2D = type 2 diabetes mellitus; BP = blood pressure

CHAPTER TWO: MAJOR RESEARCH PROJECT

THE FEASIBILITY AND ACCEPTABILITY OF A NARRATIVE THERAPY GROUP APPROACH FOR ADOELSCENTS WITH TYPE 1 DIABETES: A PILOT STUDY

Vanessa Watt *

*Address for correspondence

Mental Health and Wellbeing

Gartnavel Royal Hospital

1055 Great Western Rd

Glasgow

G12 0XH

E-mail: v.watt.1@research.gla.ac.uk

KEYWORDS: narrative therapy, outsider witness, type 1 diabetes, adolescents

Written in accordance with the British Journal of Health Psychology (Appendix 2.1)

LAY SUMMARY

Individuals with type 1 diabetes (T1D) have a number of important daily tasks they must complete in order to manage their condition. This can include checking blood glucose levels, administering insulin and monitoring diet and physical activity. For adolescents with diabetes this can be a particularly challenging task.

An innovative approach based on “narrative therapy” has been used within this research study. Two individuals aged 19 and 27 who had previously struggled to control their diabetes were invited to meet with adolescents aged 12 and 15 years old who were currently struggling to manage their condition. We referred to these young adults as “experienced patients” as they have first-hand experience of what it is like to live with T1D.

Whilst there are a number of challenges in engaging with adolescents with T1D, this therapeutic group did appear to be a positive addition to usual care. Feedback from follow-up interviews suggested that taking part in the group had been a positive experience for participants, helping them to feel less isolated and more motivated to manage their condition. The experienced patients also reported that the group had been beneficial in helping them to reflect on their own experiences of having diabetes. However, no significant improvements were observed for more formal measures including average blood glucose over time, diabetes-related distress and self-efficacy.

Further research with a larger number of participants is required in order to draw more conclusive findings on this approach for adolescents with T1D.

ABSTRACT

Objectives: This study aimed to investigate the feasibility and acceptability of a narrative therapy group approach for adolescents with type 1 diabetes (T1D).

Design: The study employed a between-group, repeated measure design comparing a narrative therapy group intervention to a control group who received treatment-as-usual.

Methods: 75 adolescents aged between 12 and 15 years old who had been identified as having poorly controlled T1D (HbA1c > 8%), were invited to participate in a one-off narrative therapy group. A total of eight individuals agreed to take part and were randomly allocated to either the intervention group (*n*=4) or treatment-as-usual (*n*=4). Information on the acceptability of this approach was gathered from follow-up interviews three months after attendance at the group. Outcome measures included HbA1c, diabetes-related distress and self-efficacy.

Results: The adolescents who did attend the intervention group reported it to have been a beneficial experience which had helped them to feel less isolated in their experience of living with diabetes. Additionally, some participants reported that the group had provided them with a 'wake-up' call and had encouraged them to re-think the way they manage their condition. However, no significant changes in HbA1c, diabetes-related distress or self-efficacy were observed in either the intervention or the control group at three month follow-up.

Conclusions: This novel group approach was considered to be an acceptable adjunct to treatment-as-usual. All adolescents who attended the group reported that they would recommend it to other young people with T1D. A larger scaled study would be required in order to determine whether this approach can improve glycaemic control and psychosocial outcomes in an adolescent population.

INTRODUCTION

Diabetes in adolescence

It has been estimated that approximately 25,000 individuals in the UK under the age of 25 are living with type 1 diabetes (T1D) (Diabetes UK, 2010). This condition can be extremely difficult to manage as patients must learn how to maintain the balance between insulin dosage, diet and activity (Waller, 2004). Furthermore, during adolescence, metabolic control often worsens and if not addressed, can lead to significant long-term health consequences (Dabadghao et al., 2001). During the transition from childhood to adolescence, peer relationships become central to the individual's sense of identity. For those with a diagnosis of diabetes, the restrictions placed upon them by their condition can impact on their sense of belonging within a peer group and as a result some will go on to neglect health regimes and self-care in favour of peer group acceptance (Kyngas et al., 1998).

Current psychological treatment of diabetes

Individuals with T1D are typically managed within an outpatient setting where they receive input from a medical consultant, specialist nurse and a dietitian (Hampson et al., 2001). In addition to the medical management of diabetes, there are recommendations that educational and psychosocial interventions should also be offered as an integral part of diabetes care (Gage et al., 2004).

A systematic review of educational and psychosocial interventions with adolescents with T1D was undertaken by Hampson et al. (2001). A total of 62 studies were included for evaluation, of which 25 were randomised controlled trials. Effect sizes were calculated from 14 of these studies and indicated a small to medium effect. The authors emphasised the importance of targeting individuals with poorly controlled diabetes as a way to reduce hospitalisations and future complications (Hampson et al., 2001).

Expert patients

In 2001, the Department of Health (DoH) published a document entitled "*The expert patient: a new approach to chronic disease management for the 21st century".* The concept of 'expert patient' is based on the assumption that individuals affected by chronic illness are likely to develop expertise in managing their condition and this expertise will differ in nature to the knowledge of health care professionals (Wilson et al., 2007).

One key example of how this policy was put into practice was through the development of the Expert Patient Programme (EPP). This was set up in order to help reduce severity of symptoms and improve confidence, resourcefulness and self-efficacy of those living with chronic illness (Tattersall, 2002). These programmes are facilitated by trained educators who have their own personal experience of living with the chronic health condition.

Evaluation of the EPP reported that patients showed moderate gains in self-efficacy, and improvements in quality of life (QoL) and psychological wellbeing (Kennedy, 2007). However, the EPP was criticised as it appeared to be attracting those patients who were already good self-managers and was failing to reach those patients who might benefit the most (Kennedy, 2007).

Narrative therapy approaches

In recent years, patient education programmes targeting self-management in diabetes and other chronic diseases have undergone considerable changes. There is a growing belief that adopting healthy habits depends less on information and skills and more on personal intrinsic motivation to make and sustain changes (Piana et al., 2010). Therefore, it is important to think of creative and alternative ways to engage with adolescents with T1D in order to increase motivation and improve diabetic control.

One psychological approach that is gaining both academic and clinical accolade is that of narrative therapy. This approach emphasises that people are experts in their own lives. It

acknowledges that as humans we are always seeking ways of interpreting our world and in doing this, we create stories about ourselves and others. These stories then often influence the way we lead our lives. Narrative therapists believe that hearing the way in which a person tells their story can provide valuable information about how that individual makes sense of their situation and how they decide to live their life (Morgan, 2000).

As part of this approach, 'outsider witnesses' are sometimes invited to listen to therapeutic conversations. Outsider witnesses may or may not be known to the individual and will vary in their level of knowledge and experience in relation to the therapeutic issue being addressed. The outsider witness role is to listen to the individual's 'preferred stories' or 'ways of living' and help to reflect on what they hear.

Narrative therapy approaches have been utilised in previous research studies with adolescents with T1D. For example, Piana et al. (2010) evaluated the effects of a narrative-autobiographical approach for adolescents with T1D. Ninety four adolescents with T1D attended a nine day summer camp and participated in structured daily writing sessions on diabetes which was integrated with daily interactive self-management education. Follow-up questionnaires revealed that writing about diabetes had been a very liberating experience and helped the adolescents to overcome their feelings of isolation and increase their self-efficacy and acceptance of living with diabetes (Piana et al., 2010). However, follow-up data was only obtained from approximately 50% of the adolescents who attended the summer camp. This raises questions about the generalisability of the results as it is possible that those that who had a more favourable experience were more motivated to return their questionnaires. As a result, some of the more negative perspectives on the therapeutic approach may have remained undetected. In addition, no control group was utilised within this study which makes it difficult to determine whether it was the intervention approach per-se that influenced outcomes or whether there were other factors that were instrumental in eliciting change.

Background and rationale for present study

A novel group approach drawing on narrative therapy was undertaken at the University College London Hospital. Adolescents who were patients within an inpatient setting and who were presenting with symptoms of pain and fatigue were recruited (Christie et al., 2010). The authors piloted a one-off workshop lasting approximately two hours. In total, eight participants were recruited; four were current patients on the ward and the remaining four were individuals who had previously been inpatients but who were now managing to cope with their symptoms more effectively. These individuals were known as 'experienced consultants' and were included within the group to act as outsider witnesses. The four experienced consultants had personal experience of what it is like to struggle with the challenges facing the current inpatients and had 'expert' knowledge about how to tackle many of the difficulties the adolescents were facing.

The findings from this small project reported positive outcomes for the adolescents within the inpatient ward, including progress in managing their physical symptoms and a positive change in attitude towards their current difficulties (Christie et al., 2010).

AIMS/OBJECTIVES

The present study therefore aims to replicate this narrative therapy group approach with adolescents with a diagnosis of T1D. The primary objective of this research study was to assess the feasibility of conducting a larger controlled trial and to determine whether the group was considered to be an acceptable addition to treatment-as-usual (TAU) for adolescents with T1D. Specifically the pilot study aimed to:

1. Assess if a larger research study would be warranted
2. Inform the design of future studies in terms of the "PICO" requirements outlined by the Scottish Intercollegiate Guidelines Network (SIGN 50, 2011).

a) Target Population: Confirm the eligibility and suitability of individuals who are likely to benefit from the treatment

b) Intervention: Identify any modifications required to the narrative therapy group approach

c) Control group: Provide detailed information on what TAU involves

d) Outcomes: Confirm which outcomes may be appropriate to target in future interventions

RESEARCH QUESTIONS

Primary questions

1. What are the potential numbers of participants who fulfil eligibility criteria and what proportion of these individuals consent to take part in this narrative therapy group?

2. Do participants within the narrative therapy group report the intervention to be an acceptable addition to TAU and what modifications may be required for future interventions?

Secondary questions

1. Does participation in the narrative therapy group have an effect on HbA1c levels at three month follow-up?

2. Does participation in the narrative therapy group reduce diabetes-related distress at three month follow-up?

3. Does participation in the narrative therapy group increase self-efficacy at three month follow-up?

METHODS

Study design

The study employed a between-group, mixed method, repeated measure design. Using a stratified random sampling approach based on gender, participants were allocated to either the intervention or control group. Allocation to groups was independently conducted using a computerised random number generator.

Study participants

Participants

Patients were invited to take part in the research study if they were aged between 12 and 15 and had had a diagnosis of T1D for at least one year. In addition, inclusion criteria specified that individuals required an HbA1c measure of > 8% at their last two clinic appointments. Furthermore, patients were excluded from the study if: they had a known learning disability, English was not their first language and/or they were currently receiving psychological input from the Paediatric Psychology team.

Experienced patients

In consultation with the medical and research team, it was decided that the individuals who would attend the group as outsider witnesses would be referred to as "experienced patients". This differs slightly to the terminology used by Christie et al. (2010), however when consulted, the medical team felt that this would be the most appropriate term to adopt within this setting.

Ethical considerations

Ethical approval was granted from the West of Scotland Ethics Committee on the 29/11/2011 (Appendix 2.2) and was supported by the local NHS Research and Development Department.

Recruitment

Participants

After gaining ethical approval, information sheets were sent to those who met the inclusion criteria (Appendix 2.3) and their parent/guardian (Appendix 2.4). Potential participants were asked to complete an opt-in form (Appendix 2.5) which indicated their interest in participating in the research study. Following this, participants were randomly allocated to either the intervention group or control group and consent forms were completed by both the adolescent (Appendix 2.6) and their parent/guardian (Appendix 2.7). Following the intervention, participants were asked if they would be willing to provide further information about their experiences of attending the group by taking part in a follow-up interview. Again further consent was obtained from the participants and their parent/guardian.

Experienced patients

Diabetes Consultants identified and approached patients who were aged 17 and over who had previously struggled to manage their diabetes but whom were now showing improvement in their diabetes management. These patients were invited to attend the group as experienced patients. Potential experienced patients were given an information sheet (Appendix 2.8) on the research study and were asked to complete an opt-in form (Appendix 2.9) if they were interested in becoming involved; alternatively they were invited to express interest to the Consultant who would then pass on their details to the research team. Once interest had been expressed, the experienced patients were invited to sign a consent form (Appendix 2.10) to confirm that they wished to participate in the group.

Description of intervention approach

Intervention group

The intervention group were asked to attend a one-off narrative therapy group at the hospital which they would usually attend for their clinic appointments. In total, four participants and two experienced patients attended the group. The group lasted two hours and was facilitated in accordance with White's (2003; 2007) recommendations on involving outsider witnesses within therapeutic interactions. A brief outline of the format and structure of the group is provided below.

Key stages in involving outsider witnesses within therapeutic interventions:

- The 'telling' of the significant story by each person in the group
- The 'retelling' of each story by the experienced patients who were invited to participate as outsider witnesses
- The 'retelling' of the outsider witnesses 'retelling' by the adolescents in the group

The process of 'retelling' involves four key stages: (1) identifying the expression, (2) describing the image, (3) embodying response and (4) acknowledging transport. This was facilitated by the Trainee Clinical Psychologist and Clinical Psychologist throughout the group. A brief description of this is provided below.

1. *Expression*

The individual is asked to speak about what they have heard that they were most drawn to, what caught their attention and captured their imagination.

2. *Focus on the Image*

They are then asked to describe an image or mental picture that came to their mind as they listened to the stories reflecting on the individual's values, beliefs, hopes, aspirations, dreams and commitments.

3. *Personal Resonance*

The outsider witness is encouraged to provide an account of why they were so drawn to certain expressions with a specific focus on their understanding of the way these expressions struck a chord with their own personal history.

4. Transport

The outsider witness is encouraged to speak of the ways in which they have been influenced by having listened to the adolescent's stories.

Control group

Individuals who were randomised to the control group continued to receive regular quarterly clinic review appointments with the medical team.

Outcome measures

Primary outcome measures

Glycaemic control

Glycaemic control was assessed from participants' glycated haemoglobin levels (HbA1c) which measures average blood glucose concentration over the past 8-12 weeks. For most people with diabetes, the HbA1c target is below 48 $mmol \cdot mol^{-1}$ or (6.5%). Evidence suggests that a score of 6.5% or lower can reduce the risk of developing diabetic complications, such as nerve damage, eye disease, kidney disease and heart disease (Diabetes UK, 2012).

Secondary outcome measures

Diabetes-related distress

Diabetes-related distress was measured using the "*Problem Areas in Diabetes-Teen Version" (PAID-T),* Weissberg-Benchell et al. (2011) (Appendix 2.11). Evaluation of the psychometric qualities of this questionnaire has produced satisfactory findings (Weissberg-Benchell et al., 2011). Respondents are required to answer 26 statements using a 6 point likert scale for each ranging from 1 (not a problem) to 6 (a serious problem). A total distress score is computed by summing the responses, to provide a score between 26 and 156. Higher scores indicate that the adolescent is experiencing more diabetes-related emotional distress.

Self-efficacy

Self-efficacy was measured using the *"Self Efficacy for Diabetes Scale"* (Stanford Patient Education Research Centre), (Appendix 2.12). This short 8 point questionnaire was used to record individual's perceptions of their self-efficacy in relation to managing their diabetes. Investigation of the psychometric properties of this scale has reported high levels of internal consistency suggesting that the scale is a reliable measure (Stanford Education Research Centre). Respondents are asked to rate their level of confidence in managing diabetes related tasks on a 10 point likert scale, ranging from 1 (not at all confident) to 10 (totally confident). A total self-efficacy score is computed by summing the total responses. Higher scores indicate a higher level of self-efficacy in relation to managing their diabetes.

Data collection

Outcome measures were collected from participants at two time points: baseline and three-month follow-up. Following randomisation, all participants were sent two questionnaires to their home address and were asked to complete them and then return them to the

researcher using the stamped addressed envelope provided. This process was again completed three months after the intervention group.

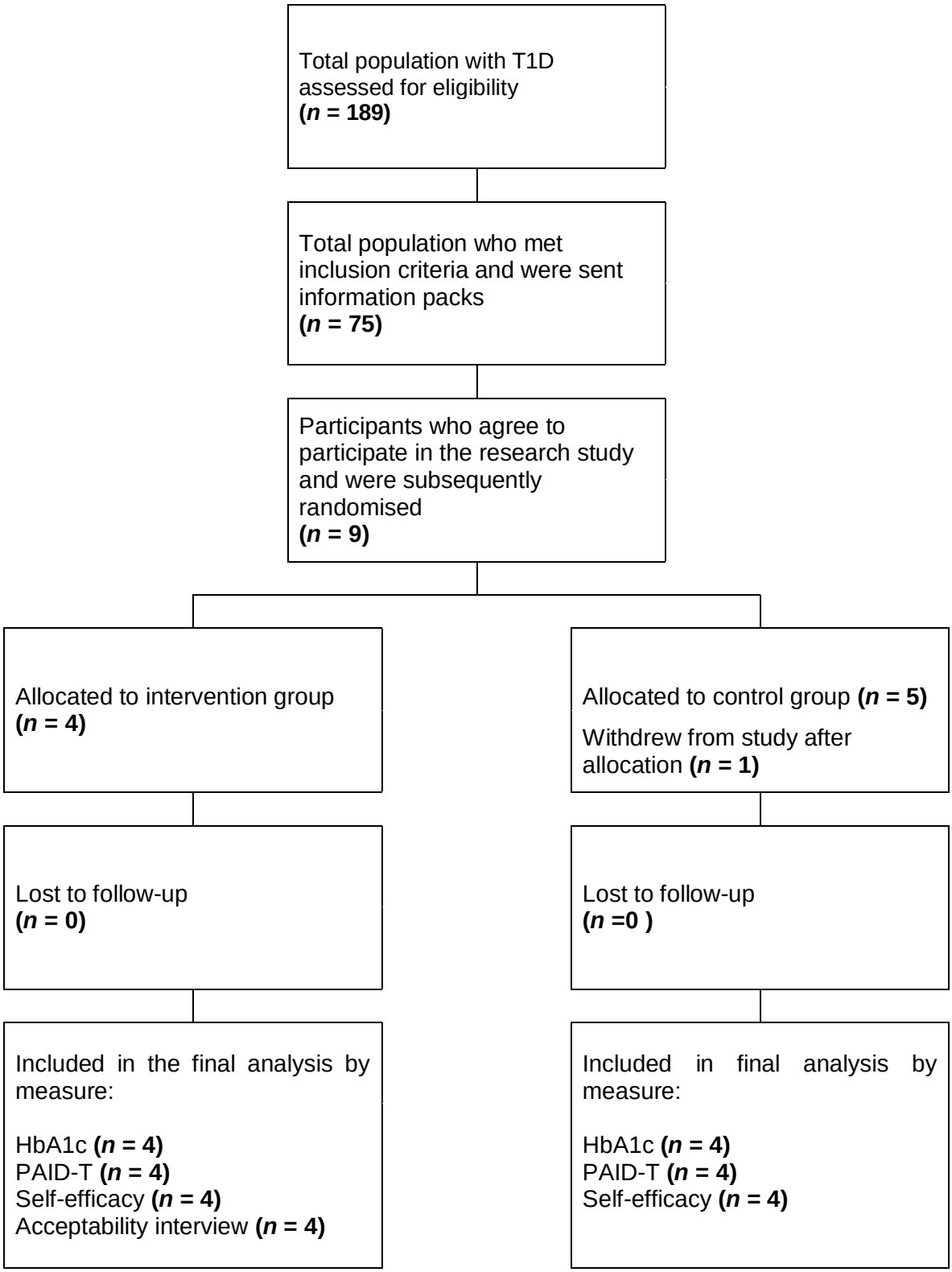
Additionally, consent was gained from all participants to access their HbA1c scores from two clinic appointments prior to the intervention group and two clinic appointments after the intervention. This information was collected at their routine clinic appointments and was passed onto the researcher from a member of the medical team. Where possible all four records of HbA1c were accessed and an average pre-intervention and post-intervention score was calculated. For some participants however, only one HbA1c measure post-intervention was available.

Data analysis

The quantitative data, including HbA1c, diabetes-related distress and self-efficacy were analysed using Predictive Analytics SoftWare (PASW for Windows, version 18.0, SPP Inc., Chicago). As the assumptions of normality were violated in the data set, non-parametric analysis was completed. Mann Whitney U-tests were completed for all outcome measures. Unless otherwise stated, data is reported as median (interquartile range; IQR). Data from the semi-structured interviews was analysed using content analysis as outlined by Bowling (2009) and Elo et al. (2007). Content Analysis has been defined as a method of analysing written, verbal or visual communication messages (Cole, 1988). This approach allows researchers to condense words into fewer content-related categories as a means of describing and quantifying phenomena (Krippendorff, 1980, Elo et al., 2007).

RESULTS

Figure 1. Participant flow diagram



Demographics

Table 1. Characteristics of adolescent participants (Mean ± SD)

Demographic Information	Intervention Group	Control Group
Gender (% male)	50	50
Age (yrs)	15.6 ± 0.8	14.0 ± 1.6
Duration of Diabetes (yrs)	8.5 ± 4.4	7.7 ± 2.2
Baseline HbA1c (%)	9.2 ± 1.1	8.4 ± 0.3

Table 2. Characteristics of Experienced Patients

Demographic Information	Experienced Patient 1	Experienced Patient 2
Gender	Female	Male
Age (yrs)	27	19
Duration of Diabetes (yrs)	16	19

Feasibility

Participants

A total of 75 individuals aged between 12 and 15 who were identified as having poorly controlled T1D (HbA1c >8%) were invited to participate in the research study. Of the 75 contacted, only nine returned the opt-in forms or made contact with the nursing team to express an interest in becoming involved (Figure 1). Following randomisation one of the participants in the control group decided that they no longer wished to be involved in the research and were therefore withdrawn from the study.

Experienced patients

Central to this intervention approach was the recruitment of experienced patients. Contact was made with three Diabetes Consultants working across Glasgow to select participants that met the inclusion criteria. Initial feedback provided from the Consultants suggested that those who were currently managing their diabetes well, had always done so, and those who struggled in the past were still struggling or were experiencing additional complications. Therefore, the initial inclusion criteria for experienced patients were deemed too stringent and instead "*individuals who had previously struggled to manage their diabetes but who have made improvements over the past year"* were identified. In total, two experienced patients were contacted by the primary researcher and both agreed to participate in the group.

Acceptability

Analysis of participant feedback

Participants were asked to provide feedback on the experience of attending the therapeutic group at three month follow-up by participating in a semi-structured interview (Appendix 2.14). Experienced patients also provided written feedback on their experience of the group. The information from these sources has been divided into three sub sections: 1) participant experiences of the group 2) feedback from the experienced patients 3) considerations for future studies. Within each of these categories the main themes from the analysis are discussed.

1) Participant experiences

The main themes to emerge from the analysis of the interview transcripts with the adolescent participants included: i) feeling less isolated; ii) a wake-up call; iii) different kind of experience and iv) feelings of relief.

i) Feeling less isolated

One of the most prominent themes to emerge was that of feeling less isolated after attending the group. All four participants stated that this was one of the most significant aspects of the group.

> *"Hearing each individual story and just knowing you are not alone and just knowing that there is someone else out there, because sometimes you can feel isolated, it was just good hearing everyone's stories"*

(Participant 1, P1, L14)

> *"I am the only one with diabetes [in my house] so I am the only one who has experience in this but it was different sitting in the group where everyone had experience of the same thing and just made me realise that I wasn't alone"*

(Participant 2, P2, L29)

ii) A wake-up call

For some of the participants, the group made them rethink the way in which they managed their diabetes. The group allowed participants to hear other people's stories and consider the potential consequences of not managing their diabetes appropriately.

> *"I was quite shocked as they let it get so bad and they put themselves in danger, I didn't want to do that so it kind of made me wisen up"*

(Participant 1, P2, L21)

"I have started to take more blood tests and just look after it a bit better… I kind of realised you have to take care of it [diabetes]"

(Participant 3, P2, L20)

In addition, one participant felt that the group reinforced the idea that diabetes is not going to go away and that there is the need to face the issues instead of trying to ignore them.

"It proved it doesn't just go away so you need to just kind of accept it, which is a big issue I have got"

(Participant 2, P2, L32)

iii) Different kind of experience

Participants reported that the group was a very new experience for them and differed considerably from their usual clinic contacts.

"Although they treat it everyday [doctors and nurses] they don't know what you go through so it is nice hearing people who are going through the same thing"

*(*Participant 1, P3, L60)

"It was nothing like I expected, I didn't really expect it to be much, I had been to see a psychologist at Yorkhill before and so I thought it was just going to be like that but it was a lot different"

(Participant 2, P1, L8)

iv) Feelings of relief

The experienced patients appeared to have provided a sense of relief to participants who felt encouraged to hear that diabetes had not prevented them from doing what they wanted in life and that it is possible to live with the ups and downs of diabetes.

> *"It just kind of gave you a bit of relief that they have been through what I am going through and have come out the other end, like they are well…it hadn't stopped her doing what she [experienced patient 1] wanted to do and she is still getting on with things whilst keeping her diabetes at bay"*
>
> (Participant 2, P3, L48)

> *"It was good; it felt like… because they still have problems [experienced patients] it shows that we won't be the only ones that are going to live with problems"*
>
> (Participant 4, P2, L34)

2) Feedback from experienced patients

The experienced patients were asked to provide written feedback on their experiences of participating in the group. Following analysis of their comments, the main themes to emerge were i) greater reflection; ii) novel therapeutic approach and iii) challenging the feeling of isolation.

i) Greater reflection

Both experienced patients reported that the group had provided them with the opportunity to think about and reflect on their own experiences of having diabetes.

"It brought quite a lot back to me from my own experiences growing up with type 1; I felt I could really empathise with the young people"

(Experienced patient 1, P1, L2)

"It allowed me to reflect on my diabetes in a way that I normally wouldn't""

(Experienced patient 2, P1, L8)

ii) Novel therapeutic approach

The format of the group was discussed by one experienced patient who felt that the structured approach allowed each participant to have a chance to reflect on their own journey through diabetes and consider their goals and hopes for the future.

"I thought it was a good idea to have each of them come up and answer the structured questions they were asked, it got them all to think about how their condition really does affect them"

(Experienced patient 1, P1, L7)

iii) Challenging the feelings of isolation

The feeling of isolation was discussed by the experienced patients within the group; they acknowledged that they have felt alone in their condition in the past but felt that the group provided the participants the opportunity to share their experiences and hear from others in a way that lead to a reduction in the feeling of being isolated.

"I think the isolation is a major one that most young people with type 1 feel at some point. This had a major effect on me when I was young and I know how hard it is"

(Experienced patient 1, P1, L12)

"I feel as the afternoon wore on, the kids began to open up and realised they were not alone in the problems they were facing and that there is always someone who's done it and seen it all before"

(Experienced patient 2, P1, L11)

3) Considerations for future

Within the interviews, participants were asked about ways in which the group could be improved or modified in the future. The following three issues were discussed: i) length of the group; ii) age of the experienced patients and iii) barriers to participation.

i) Length of the group

The majority of participants felt that they would have benefited from additional groups or a longer session in order to hear more from others with T1D to be able to share more of their own experiences. Additionally, there appeared to be some enthusiasm for attending further sessions if they were to be offered.

"It wasn't really that long and if it was longer there would have had more time to talk"

(Participant 4, P2, L48)

"It would have been better to have it over a couple of weeks because you would have got to talk to the people more"

(Participant 3, P2, L23)

ii) Age of the experienced patients

When asked about how old they felt the experienced patients should be, the majority of participants felt that age was not an issue and that older individuals would still be able to talk about their experiences and have a useful contribution to make.

"It is about experience and I am pretty sure that everyone has similar experiences so it wouldn't really matter"

(Participant 2, P3, L59)

"I don't think there would be any age that was too old"

(Participant 4, P2, L38)

It should be noted however, that one participant felt it was important that the experienced patients were younger in age to ensure that they would be able to relate to their stories and experiences.

"They should be at least under 25 because you can relate to them easier"

(Participant 3, P2, L29)

iii) Barriers to participation

The reluctance of adolescents to talk about their experiences was highlighted alongside the tendency of some young people to use avoidance strategies.

"For me, one of my problems is that I hate talking about diabetes so that was one of my biggest, not fears, but nervous things, so I like to try and shut it out rather than talk about it…I think a lot of people with diabetes are quite similar and would rather just not speak about it"

(Participant 2, P4, L74)

"Ask a teenager to talk about himself and he talks about stuff like what he has done with his pals and nothing to do with his diabetes"

(Participant 4, P3, L57)

OUTCOME MEASURES

Whilst a statistical assessment of normality would have been preferable, it has been acknowledged that such analysis may not be sufficiently sensitive in such small sample sizes and therefore a visual inspection of the data was completed (Lund Research Ltd, 2012). As the data appeared to violate the assumption of normality, non-parametric analysis was favoured.

A Mann Whitney U-test revealed no significant differences between the intervention and control group at baseline for HbA1c (Z= -1.59, P= 0.11), diabetes related distress (Z= -0.28, P= 0.88) or self-efficacy (Z= -0.43, P= 0.68).

Primary outcome measure: HbA1c

The median (IQR) for HbA1c in the intervention group were 8.9 (8.6-9.5) and 9.1 (8.3-10.0) for pre- and post- intervention, respectively. In addition, the median (IQR) for the control group were 8.4 (8.1-8.6) and 8.4 (7.9-8.8) for pre- and post- intervention, respectively (Figure 2).

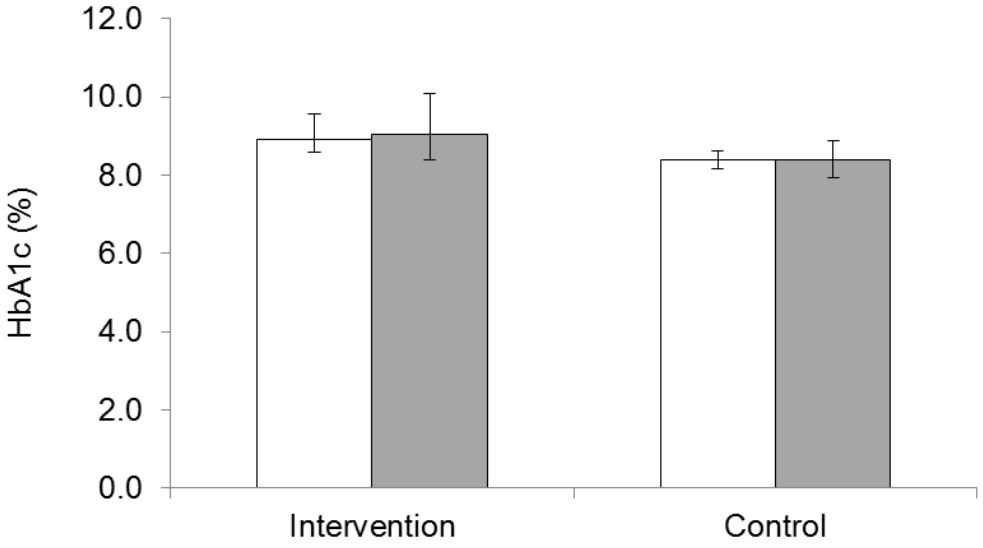


Figure 2. Median (IQR) HbA1c (%) scores for pre- (□) and post- (■) intervention

A Mann Whitney U-test revealed that there was no statistically significant difference in change scores between groups from pre- to post- intervention (Z = -0.14, p =0.88).

Secondary outcome measure: Diabetes-related distress

The median (IQR) for diabetes-related distress in the intervention group were 59.5 (51.2-70.2) and 57.0 (52.2-64.5) from pre- to post- intervention, respectively. Additionally, the median (IQR) for the control group were 57.5 (40.3-80.7) and 59.5 (45.5-70.0) from pre- to post- intervention, respectively (Figure 3).

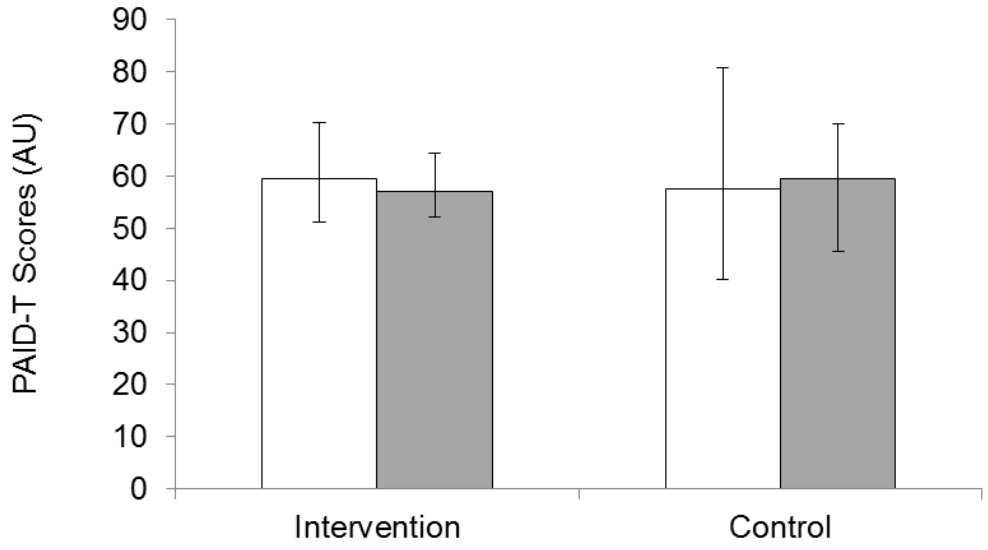


Figure 3. Median (IQR) PAID-T scores (AU) for pre- (□) and post- (▩) intervention

A Mann Whitney U-test revealed that there was no significant difference in the change scores between groups from pre- to post- intervention (Z = -0.29, p= 0.88).

Secondary outcome measure: Self-efficacy

Median (IQR) for Self-efficacy in the intervention group were 74.5 (70.2-77.7) and 70.0 (54.2-78.5) for pre- to post- intervention respectively. The median (IQR) for the control group were 72.5 (66.5-75.5) and 71.5 (69.7-74.7) for pre- to post- intervention, respectively (Figure 4).

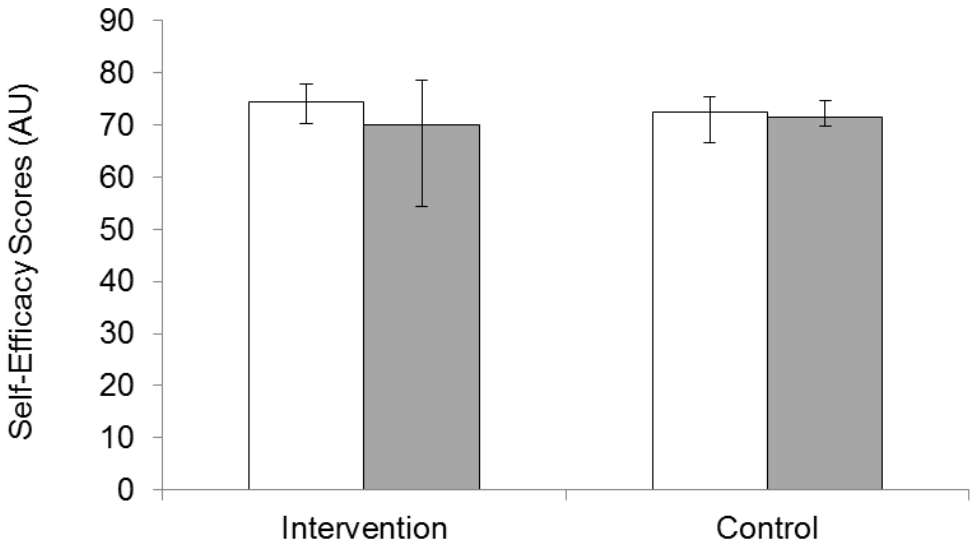


Figure 4. Median (IQR) Self-efficacy scores (AU) for pre- (□) and post- (▣) intervention

A Mann Whitney U-test revealed that there was no significant difference in change scores between the groups from pre- to post- intervention (Z=-0.86, P=0.48).

Graphs displaying the individual scores for all participants are displayed within appendix 2.13.

DISCUSSION

The primary aim of this pilot study was to investigate the feasibility and acceptability of a narrative therapy group approach for adolescents with T1D. Experienced patients were recruited to participate in a one-off group to share their experiences of living with diabetes and to reflect on the stories of other participants within the group. The structured approach

was based upon White's (2002; 2007) recommendations on involving outsider witnesses within therapeutic interventions.

The secondary aim of this study was to consider whether participation in the group intervention had any influence on participants HbA1c or their self-reported measures of diabetes-related distress and self-efficacy.

Summary of main findings

Feasibility

This pilot study raised some questions about the feasibility of running similar groups in the future. The number of adolescents who agreed to take part in the study was below what had been anticipated by the research team. That said, approximately 10% of the total population who met inclusion criteria were recruited suggesting that this would be a more realistic target for future studies. Additionally, it was difficult to identify suitable experienced patients who had previously struggled to manage their condition but who had made significant changes to their diabetes self-care. Whilst the two individuals who were approached to act as experienced patients agreed to attend the group, it may be unrealistic to ask them to do this on a regular basis without being reimbursed for their time.

Acceptability

The results from this study provide evidence that the narrative therapy group approach was an acceptable adjunct to TAU. Participants reported that the group had helped them to feel less isolated and provided a sense of relief as to what living with diabetes means for them and their future. Such findings have also been noted within other research studies which have employed a group approach for adolescents with T1D (Due-Christensen et al., 2012; Greco et al., 2001; Graue et al., 2005; Piana et al., 2010;; Waller et al., 2005). Furthermore, participants reported that hearing other people's experiences of living with diabetes had provided a wake-up call and encouraged them to rethink their own approach to managing

their condition. In addition, whilst some of the adolescents were initially reluctant about attending a group intervention, high levels of satisfaction were reported by all participants at the follow-up interviews.

Group interventions have been considered as a cost-effective approach with the potential to influence psychosocial outcomes and glycaemic control (Greco et al., 2001; Van der Ven, 2003), however barriers to group participation have also been addressed in previous research studies (Christie et al., 2008).

Outcomes

There were no significant improvements for either the intervention group or the control group for HbA1c, diabetes-related distress or self-efficacy at three month follow-up.

Study limitations

There are a number of limitations that should be considered when interpreting the results of this study. The number of participants recruited was small and below what was expected. Whilst this does provide valuable information on the feasibility of running similar groups, the acceptability and outcome data should be interpreted with some caution. Additionally, all participants were recruited from one hospital in Glasgow and as a result it may be difficult to generalise the findings across regions.

The group session was not audio or video recorded and no measure of treatment fidelity was used. Unlike some other approaches, such as Cognitive Behavioural Therapy (CBT) and Motivational Interviewing (MI), there are no standardised treatment fidelity checklists that have been created in order to assess adherence to this narrative therapy approach. In order to mitigate the effects of this limitation, the group was co-facilitated by a qualified Clinical Psychologist with experience in this approach and the group was highly structured around the guidelines offered by White et al. (2002; 2007).

Follow-up interviews proved invaluable as they provided further information on the acceptability of the approach. It is possible however that the answers provided by participants may have been biased as they could have felt the need to provide socially acceptable answers. That said, the interview was framed as an opportunity to provide information on both the strengths and limitations of the experience in order to help improve the intervention for adolescents in the future, and as a result, the participants did appear to be open in their responses. In the future it may be useful to utilise a brief social desirability questionnaire such as Hays (1989) to determine whether this may have influenced participant's responses.

Implications for clinical practice and future research

The present research study provides information on the feasibility and acceptability of this narrative therapy group approach for adolescents with T1D. Drawing on the PICO framework (SIGN 50, 2011), the following considerations may be helpful for researchers in the future.

Population

It seems realistic to question the feasibility of running similar groups in the future due to the small number of adolescents who agreed to participate. As indicated in the follow-up interviews, adolescents are often reluctant to participate in group sessions and therefore ways in which to increase motivation and promote the value of such an intervention should be considered prior to running a similar intervention in the future. Additionally, the criteria for recruitment of experienced patients may need some consideration in order to widen the scope of potential participants.

Intervention

The intervention itself was deemed to be an acceptable adjunct to treatment-as-usual by all participants in the intervention group. All participants reported that they would recommend

the group to other adolescents. Many participants felt that they would benefit from additional sessions and therefore it may be useful to consider running the groups over a couple of weeks to consider if further intervention would produce greater improvement in outcome measures.

Control group

Within this study, those allocated to the control group continued to receive TAU. It may be useful for future studies to add a third prong to the research design and compare the narrative therapy group to another form of psychological intervention alongside a control group. This would help to determine whether any benefits seen in the narrative therapy group would be unique to the approach and would help to explore the acceptability of this approach compared to another intervention.

Outcomes

The use of HbA1c as a measure of glycaemic control would appear to be an appropriate outcome measure to use within any future studies. HbA1c is routinely collected for all individuals with T1D and therefore the accessibility of such scores and the validity of the results would support its application within future research studies.

Additionally the PAID-T has been validated for an adolescent population and therefore its use in future studies would be recommended.

Within this study, self- efficacy was measured through the *"Self Efficacy for Diabetes Scale"* (Stanford Patient Research Education Centre). As this questionnaire contained only eight questions it was considered to be a short and therefore accessible questionnaire to use with this population. Whilst a high level of internal consistency has been reported for this measure, it is still awaiting full validation. Indeed, it was interesting to note than many adolescents rated themselves as "totally confident" for a majority of the questions. Taking into account these individuals were recruited due to their difficulties in managing their

diabetes, this finding is somewhat intriguing. It may be that this measure is not sensitive to an adolescent's lifestyle and therefore it may not have tapped into relevant areas for this population. Alternatively, it may be that the adolescents recruited within this study may lack insight into their difficulties. It would be interesting to explore this in more detail in future research considering the role of self-efficacy in adolescents with diabetes.

CONCLUSIONS

The number of participants recruited in this study was small which raises some questions about the feasibility of conducting a larger scaled research study, particularly if adolescents are reluctant to attend similar group sessions. Creative ways to increase motivation and to encourage adolescents to attend such groups may be required.

In relation to outcome measures, no significant changes were found in measures of HbA1c, diabetes-related distress or self-efficacy following attendance at the group. This may suggest that this one-off group session may not have been sufficient in order to change the way in which the adolescents manage their diabetes.

Those who did attend the group reported it to be a positive experience that they would recommend to other adolescents with T1D. Furthermore, all participants acknowledged that the group had helped them to feel less isolated in managing their condition. Additionally, the experienced patients reported that the group had been a positive experience whereby they had been encouraged to reflect on their own diabetes in a way they may not have otherwise.

Further research utilising a larger sample size would be required in order to support the preliminary findings of this pilot study.

REFERENCES

Bowling, A. (2009). *Research methods in health: Investigating health and health services* (3rd edition). Open University Press. England.

Christie, D. (2010). *Using experience consultants as outsider witnesses*. Peer Communication.

Christie, D., Romano, G. M., Thompson, R., Viner, R. M., & Hindmarch, P. C. (2008). Attitudes to psychological groups in a paediatric and adolescent diabetes service – implications for service delivery. *Paediatric Diabetes*, 9, 388-392.

Cole, F. L. (1988). Content analysis: process and application. *Clinical Nurse Specialist*, 2 (1), 53-57.

Dabadghao, P., Vidmar, S., & Cameron, F. (2001). Deteriorating diabetic control through adolescence-do the origins lie in childhood? *Diabetic Medicine*, 18, 889-894.

Department of Health. (2001). *The expert patient: a new approach to chronic disease management for the 21st century*. Retrieved June 23, 2012, from http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_4018578.pdf

Diabetes UK. (2010). *Diabetes in the UK 2010: Key statistics on diabetes*. Retrieved July 2, 2012, from http://www.diabetes.org.uk/Documents/Reports/Diabetes_in_the_UK_2010.pdf

Due-Christensen, M., Zoffmann, V., Hommel, E., & Lau, M. (2012) Can sharing experiences in groups reduce the burden of living with diabetes, regardless of glycaemic control? *Diabetic Medicine*, 29, 251-256.

Elo, S., & Kyngas H. (2007). The qualitative content analysis process. *Journal of Advanced Nursing.* 62 (1), 107-115.

Gage, H., Hampson, S., Skinner, T., Hart, J., Storey, L., Foxcroft, D., Kimber, A., Cradock, S., McEvilly, E. (2004). Educational and psychosocial programmes for adolescents with diabetes: approaches, outcomes and cost effectiveness. *Patient Education and Counselling*, 53, 333-346.

Graue, M., Wentzel-Larsen, T., Hanestad, B. R., & Sovik, O. (2004). Evaluation of a programme of group visits and computer assisted consultations in the treatment of adolescents with type 1 diabetes. *Diabetic Medicine*, 22, 1522-1529.

Greco, P., Shroff-Pendley, J., McDonell, K., & Reeves, G. (2001). A peer group intervention for adolescents with type 1 diabetes and their best friends. *Journal of Paediatric Psychology*, 10 (8), 485-490.

Hampson, S. E., Skinner, T. C., Hart, J., Storey, L., Gage, H., Foxcroft, D., Walker, J. (2001). Effects of Educational and Psychosocial Interventions for adolescents with diabetes mellitus: a systematic review. *Health Technology Assessment*, 5 (10), 1-79.

Hays R. D. (1989). A five-item measure of socially desirable response set. *Educational and Psychological Measurement*, 49, 629-636.

Kennedy, A., Rogers, A., & Gately, C. (2007) Assessing the introduction of the Expert Patient Programme into the NHS: A realistic evaluation of recruitment to the national lay led self care initiative. *Primary Health Care Research and Development.* 6, 137-148.

Krippendorff, K. (1980) *Content Analysis: An introduction to its methodology*. Sage Publications, Newbury Park.

Kynags, H., Hentinen, M., & Barlow, J. (1998). Adolescent's perceptions of physicians, nurses, parents and friends: help or hindrance in compliance with diabetes self care. *Journal of Advanced Nursing*, 27, 760-769.

Laerd Research Ltd. *Testing for normality using SPSS*. Retrieved June 23, 2012, from https://statistics.laerd.com/spss-tutorials/testing-for-normality-using-spss-statistics.php

Morgan, A. (2000). *What is Narrative Therapy? An easy to read introduction*. Dulwich Centre Publications, Adelaide.

Piana, N., Maldonato, A., Bloise, D., Carboni, L., Careddu, G., Fraticell, E., ... Romani, G. (2010). The narrative-autobiographical approach in the group education of adolescents with diabetes: A qualitative research on its effects. *Patient Education and Counselling*, 80, 56-63.

Scottish Intercollegiate Guideline Network 50. (2011). *A guideline developer's handbook healthcare improvement Scotland*, Health Improvement Scotland.

Stanford Patient Research Education Centre. *Self-Efficacy for Diabetes*. Retrieved June 2, 2011, from http://patienteducation.stanford.edu/research/sediabetes.html

Tattersall, R. (2002). The expert patient: a new approach to chronic disease management for the twenty first century. *Clinical Medicine*, 2 (3), 227-229.

Van der Ven, N. (2003). Psychosocial Group Interventions in Diabetes Care. *Diabetes Spectrum*, 16 (2), 88-95.

Waller, H., Eisler, C., Heller, S., Knowles, J., & Price, K. (2005). Adolescents and their parent's views on the acceptability and design of a new diabetes education programme: a focus group analysis. *Child: Care, Health and Development*, 31 (2), 283-289.

White, M. (2002). *Definitional ceremony and outsider-witness responses*: Workshop Notes. Retrieved October 21, 2011, from http://www.dulwichcentre.com.au/

White, M. (2007). *Maps of Narrative Practice*. Norton Professional Books, London.

Weissberg-Benchell, J., & Antisdel-Lomaglio, J. (2011). Diabetes specific emotional distress among adolescents: Feasibility, reliability and validity of the Problem Areas in Diabetes Teen Version. *Pediatric Diabetes, 12, 341-344.*

Wilson, P., Kendall, S., & Brooks, F. (2007). The Expert Patient Programme: a paradox of patient empowerment and medical dominance. *Health and Social Care in the Community*, 15 (5), 426-438.

CHAPTER THREE: ADVANCED CLINICAL PRACTICE I

CRITICAL REFLECTIVE ACCOUNT

THE MEANING OF BECOMING A 'SPECIALIST TRAINEE': A JOURNEY OF PERSONAL AND PROFESSIONAL DEVELOPMENT

Vanessa Watt*

*Address for correspondence

Mental Health and Wellbeing

Gartnavel Royal Hospital

1055 Great Western Rd

Glasgow

G12 0XH

E-mail: v.watt.1@research.gla.ac.uk

Abstract

This reflective account focuses on my experiences of working within a Community Paediatric Service. The account describes both my personal and professional development over the course of my training, drawing on my experiences of working with one family undergoing an assessment for autism. I consider the wider role of Psychology and in particular, reflect on the unique skills and knowledge that Clinical Psychologists can offer in helping to understand complex behaviours.

The account is structured using the model of reflection by Boud, Keogh and Walker (1985) which outlines three key phases of reflection: *returning to* the *experience, reflective processes and outcomes and action*. The model places great emphasis on the importance of affective learning and the need to recapture the emotions present at the time of experience and reflect on how these may help or hinder the leaning and reflective process.

Guided by the National Occupational Standards for Psychology (British Psychological Society, 2006), I have reflected on my experiences of training and have re-evaluated my understanding of what it means to be a competent clinician. I conclude by identifying areas for future development and outline my commitment to continue to reflect on my clinical practice.

CHAPTER FOUR: ADVANCED CLINICAL PRACTICE II.

CRITICAL REFLECTIVE ACCOUNT

FINDING MY ROLE WITHIN A CAMHS TEAM

Vanessa Watt*

*Address for correspondence

Mental Health and Wellbeing

Gartnavel Royal Hospital

1055 Great Western Rd

Glasgow

G12 0XH

E-mail: v.watt.1@research.gla.ac.uk

Abstract

Using Kolb's Learning Cycle (1984) I take the opportunity to reflect on the changing role of a Clinical Psychologist using my experience of working within a Child and Adolescent Mental Health Service (CAMHS). I explore my own anxieties about joining a team where I initially felt that everyone was delivering some form of 'psychological intervention' and I reflect on how my views of this have changed over the course of the placement. Drawing on current policies and relevant research, this account has encouraged me to reflect on the unique skills that a Clinical Psychologist can offer to a multidisciplinary team (MDT). Furthermore, this account has enabled me to think about my own areas for future development and reflect on the way in which I will continue to progress once leaving the security of the doctorate course.

Appendix 1.1: Author Guidelines (Diabetes Research and Clinical Practice)

Diabetes Research and Clinical Practice is an international journal for health-care providers and clinically oriented researchers that publishes high-quality original research articles and expert reviews in diabetes and related areas. The role of the journal is to provide a venue for dissemination of knowledge and discussion of topics related to diabetes clinical research and patient care. Topics of focus include translational science, genetics, immunology, nutrition, psychosocial research, epidemiology, prevention, socio-economic research, complications, new treatments, technologies and therapy.

Guide for Authors

EDITORS

Manuscript Submission

Manuscripts should be submitted online at http://ees.elsevier.com/diab and the instructions on the site should be followed closely. Authors may submit manuscripts and track their progress to final decision. Reviewers can download manuscripts and submit their reports to the Editors.

The full contact details for the Editorial Office are shown below:

Diabetes Research and Clinical Practice Editorial Office, Elsevier Ltd., The Boulevard, Langford Lane, Kidlington, Oxford, OX5 1GB, UK; Phone: +44 (0) 1865 843753 Fax: +44 (0) 1865 843977 Email: Diab@elsevier.com

Journal Principles

All manuscripts submitted to *Diabetes Research and Clinical Practice* should report original research not previously published or being considered for publication elsewhere, make explicit any conflict of interest, identify sources of funding and generally be of a high ethical standard.

Submission of a manuscript to this journal gives the publisher the right to publish that paper if it is accepted. Manuscripts may be edited to improve clarity and expression. Submission of a paper to *Diabetes Research and Clinical Practice* is understood to imply that it has not previously been published and that it is not being considered for publication elsewhere.

Article Types

N.B. For reasons of available space, manuscripts that exceed the required word limits (below) will be declined automatically. All articles other than Editorials and Letters to the

Editor are subject to full peer review.

1. **Editorials** are either written or commissioned by the Editors and should not exceed 1000 words (not including a maximum of 20 references; one small figure can be included).

2. **Commentaries** (1000 words not including a maximum of 20 references and one small figure) offer a stimulating, journalistic and accessible insight into issues of common interest. They are usually commissioned by the Editors but unsolicited articles will be considered. Debates comprise two commentaries of opposing or contrasting opinion written by two different groups of authors. Controversial opinions are welcomed as long as they are set in the context of the generally accepted view.

3. **Original Research Articles** should be designated either (a) *Basic Research* (b) *Clinical Research* or (c) *Epidemiology* and should be a maximum of 5000 words. The word limit includes a combined total of five figures or tables with legends, but does not include up to 50 references and an abstract of up to 200 words structured according to *Aims, Methods, Results, Conclusions* and *Keywords*. Divide the manuscript into the following sections: Title Page; Structured Abstract; Introduction; Subjects, Materials and Methods; Results; Discussion; Acknowledgements; References; figures and tables with legends.

4. **Brief Reports** should not exceed 1000 words, including a summary of no more than 50 words (but not including up to 20 references) and may be a preliminary report of work completed, a final report or an observation not requiring a lengthy write-up.

5. **Review articles** should be a maximum of 5000 words, including a summary of no more than 200 words (not including up to 75 references) with subheadings in the text to highlight the content of different sections. The word limit includes a combined total of five figures or tables with legends. Reviews are generally commissioned by the Editors but unsolicited articles will be considered.

6. **Letters to the Editor** should be no more than 400 words.

Brief Reports and Letters to the Editor will only be published electronically but will be listed in the print Table of Contents. These articles can be cited by Digital Object Identifier (DOI) rather than page number.

For full details see:

http://www.elsevier.com/wps/find/journaldescription.cws_home/505949/authorinstructions

Appendix 1.2: Data Extraction Form

GENERAL INFORMATION	
Date of Data Extraction	
Authors and Date	
Article Title	
Source of Publication	
Country of Origin	
Any Further Relevant Information	

STUDY CHARACTERISTICS	
Aim/Objective of study	
Study Design	
Study Inclusion Criteria	
Study Exclusion Criteria	
Recruitment Procedures (Randomisation/allocation/blinding)	

PARTICIPANT CHARACTERISTICS	
Age Range of Participants	
Gender	
Ethnicity	
Type of Diabetes	
Number of Participants in Intervention Group/Control Group/Comparison Group	

INTERVENTION AND SETTING	
Setting in which Intervention is delivered	
Description of the Intervention	**What?** **For how long?** **How many?**
Delivered by who? What training?	
Description of the Control /Comparison Group	**What?** **For how long?** **How many?**

OUTCOME DATA/RESULTS	
Outcomes measured	
Dates of assessment/follow up	
Number of participants enrolled in study at start?	
Number of participants included in analysis	
Number of withdrawals, exclusions, lost to follow up	
Results of study analysis • **P values** • **CI intervals** • **Means** • **SD's**	

DISCUSSION/CONCLUSIONS	
Study Limitations	
Conclusions	
Areas highlighted for future research	

Appendix 1.3: Quality Criteria Assessment Checklist

Motivational Interviewing in Diabetes: A systematic Review of the literature	
Authors	
Title of Article	
Title of Journal	
Date of publication	
Completed by	

Question/Section of Article	Item	Quality Rating Score
Aims/Objectives Does the study have a clearly focused question?	1.1	1 Yes 0 No
Are the aims and hypotheses clearly laid out in the paper?	1.2	2 Aims and Hypotheses clearly stated 1 Aims or hypotheses stated 0 No
Introduction Has the scientific background and explanation of rationale been provided?	2	2 Well described and clear focus 1 Adequate rationale provided 0 Poorly described
Methods (design) Do the authors provide a clear description of the research design?	3.1	2 Yes clearly outline 1 some reference 0 No not clear
Methods (participants) Are the characteristics of the participants and the controls clearly described?	3.2	2 Both groups described clearly 1 Partly described 0 No
Methods (participants) Is it clear how the participants and controls were identified and recruited to the study?	3.3	2 Well defined 1 Limited information provided 0 No

Methods (participants) Were the inclusion/exclusion criteria clearly defined?	3.4	1 Yes 0 No
Methods (participants) Was a power calculation used or the sample size justified?	3.5	1 Yes 0 No
Methods Were the intervention and control group content described in sufficient detail to allow replication including how and when they were administered?	3.5	2 Well described to allow replication 1 Somewhat described 0 Poorly described/unable to replicate
Methods Was the therapist training/competence to deliver the intervention described?	3.7	2 Clearly stated and described 1 Limited description provided 0 No
Methods Were participants randomly allocated to groups?	3.8	1 Yes (answer 3.9 and 3.10) 0 No: (move on to 3.11)
Methods- only asked in RCTs Is the process of randomisation clearly described?	3.9	2 Well described 1 Partly described 0 No
Methods - only asked in RCTs Are assessments carried out blind to the treatment group allocation?	3.10	1 Yes 0 No Rate a 0 if not described.
Methods Did the study provide details on how the interventions were standardised or how treatment fidelity was measured?	3.11	2 Yes clearly outlined 1 Some reference but limited 0 No
Methods Were the outcomes clearly defined?	3.12	1 Yes 0 No

Methods Were the measures used to assess outcomes appropriate to the population?	3.13	1 Yes 0 No
Results Does the article outline the flow of participant's through each stage?	4.1	1 Yes 0 No
Were the numbers of drop out/losses reported? Are reasons provided?	4.2	2 Clearly outlined 1 Some reference provided but limited explanation 0 No
Are baseline demographic and clinical characteristics of each group reported?	4.3	2 Very clear for both groups 1 Limited details provided 0 No
Is the analysis appropriate to the design and type of outcome measured?	4.4	1 Yes 0 No
Are the results clearly reported?	4.5	2 Yes very clear 1 moderately clear 0 No
Discussion Are the limitations of the research study described?	5.1	1 Yes 0 No
Do the authors provide recommendations for clinical practice or future research in relation to the findings?	5.2	1 Yes 0 No
Do the conclusions drawn directly link to the results achieved?	5.3	1 Yes 0 No

Maximum Total Score for RCT = 36; Maximum Total Score for Non RCT = 32

(75% + Good) (50-75%Moderate) (<50% Poor)

Appendix 2.1: Author guidelines (British Journal of Health Psychology)

The aim of the British Journal of Health Psychology is to provide a forum for high quality research relating to health and illness. The scope of the journal includes all areas of health psychology across the life span, ranging from experimental and clinical research on aetiology and the management of acute and chronic illness, responses to ill-health, screening and medical procedures, to research on health behaviour and psychological aspects of prevention. Research carried out at the individual, group and community levels is welcome, and submissions concerning clinical applications and interventions are particularly encouraged.

The types of paper invited are:

• papers reporting original empirical investigations;

• theoretical papers which may be analyses or commentaries on established theories in health psychology, or presentations of theoretical innovations;

• review papers, which should aim to provide systematic overviews, evaluations and interpretations of research in a given field of health psychology; and

• methodological papers dealing with methodological issues of particular relevance to health psychology.

1. Circulation

The circulation of the Journal is worldwide. Papers are invited and encouraged from authors throughout the world.

2. Length

Papers should normally be no more than 5000 words (excluding the abstract, reference list, tables and figures), although the Editor retains discretion to publish papers beyond this length in cases where the clear and concise expression of the scientific content requires greater length.

For full details see:

http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)2044-8287/homepage/ForAuthors.htm

Appendix 2.2: Ethics approval letters

COPY FOR YOUR INFORMATION

WoSRES
West of Scotland Research Ethics Service

NHS Greater Glasgow and Clyde

West of Scotland REC 4
Ground Floor, Tennent Building
Western Infirmary
38 Church Street
Glasgow
G11 6NT
www.nhsggc.org.uk

Dr Sarah Wilson
Senior Lecturer in Health Psychology
The University of Glasgow
Department of Mental Health and Wellbeing
Administration Building, Gartnavel Royal Hospital
Glasgow
G12 0XH

Date 07 September 2011
Direct line 0141-211-1722
Fax 0141-211-1847
e-mail evelyn.jackson@ggc.scot.nhs.uk

Dear Dr Wilson

Study title:	**The feasibility and acceptability of a narrative therapy group approach for adolescents with Type 1 diabetes: A pilot study**
REC reference:	**11/WS/0041**

The Research Ethics Committee reviewed the above application at the meeting held on 2 September 2011. Thank you for attending to discuss the study.

Ethical opinion

The Committee thanked Miss Vanessa Watt for attending the meeting and the following was discussed:

1. Miss Watt explained that participants will be asked to express their interest in joining the study but completing the opt-in form. Contact will then be made w ith the potential participant and the Participant Information Sheet and Consent Form would be sent out. The participant would then return a completed Consent Form to Miss Watt.
2. The experienced patients will be interviewed to give their experience of having diabetes.

The members of the Committee present gave a favourable ethical opinion of the above research on the basis described in the application form, protocol and supporting documentation, subject to the conditions specified below.

Ethical review of research sites

NHS Sites

The favourable opinion applies to all NHS sites taking part in the study, subject to management permission being obtained from the NHS/HSC R&D office prior to the start of the study (see "Conditions of the favourable opinion" below).

Conditions of the favourable opinion

The favourable opinion is subject to the following conditions being met prior to the start of the study.

Management permission or approval must be obtained from each host organisation prior to the start of the study at the site concerned.

Management permission ("R&D approval") should be sought from all NHS organisations involved in the study in accordance with NHS research governance arrangements.

Guidance on applying for NHS permission for research is available in the Integrated Research Application System or at http://www.rdforum.nhs.uk.

Where a NHS organisation's role in the study is limited to identifying and referring potential participants to research sites ("participant identification centre"), guidance should be sought from the R&D office on the information it requires to give permission for this activity.

For non-NHS sites, site management permission should be obtained in accordance with the procedures of the relevant host organisation.

Sponsors are not required to notify the Committee of approvals from host organisations.

Other Conditions Specified by the REC

1. The Committee asked for a copy of the topic guide to be used by the researcher.

2. In the Participant Information Sheets:
(a) Make it clear that not all participants will do narrative therapy.
(b) The section headed " Who is f unding and s upporting the research?" should be changed to "Who has reviewed the study?". Also the name of the Committee should be given, i.e. "West of Scotland Research Ethics Committee 4".

It is responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).

You should notify the REC in writing once all conditions have been met (except for site approvals from host organisations) and provide copies of any revised documentation with updated version numbers. Confirmation should also be provided to host organisations together with relevant documentation

Approved documents

The documents reviewed and approved at the meeting were:

Document	Version	Date
Covering Letter	-	09 August 2011
REC application	-	10 August 2011
Protocol	2	04 August 2011
Investigator CV	-	-
Letter of invitation to participant	1	17 August 2011

Participant Consent Form: Participant	2	04 August 2011
Participant Consent Form: Parent/Guardian	2	04 August 2011
Participant Consent Form: Experienced Patient	2	04 August 2011
Participant Information Sheet: Participant	2	04 August 2011
Participant Information Sheet: Parent/Guardian	2	04 August 2011
Participant Information Sheet: Experienced Patient	2	04 August 2011
Questionnaire: Validated - Problem Areas in Diabetes	-	-
Questionnaire: Validated - Stanford Self Efficacy for Diabetes	-	-
Questionnaire: Non-Validated - Group Evaluation	2	04 August 2011
Other: Opt In Form - Participant	1	04 August 2011
Other: Opt in Form - Experienced Patient	1	04 August 2011
Other: Disclosure Scotland	-	28 August 2009
Other: Approval University of Glasgow	-	14 July 2011
Other: CV - Student - Vanessa Watt	-	10 August 2011

Membership of the Committee

The members of the Ethics Committee who were present at the meeting are listed on the attached sheet.

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees (July 2001) and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

After ethical review

Reporting requirements

The attached document "After ethical review – guidance for researchers" gives detailed guidance on reporting requirements for studies with a favourable opinion, including:

- Notifying substantial amendments
- Adding new sites and investigators
- Notification of serious breaches of the protocol
- Progress and safety reports
- Notifying the end of the study

The NRES website also provides guidance on these topics, which is updated in the light of changes in reporting requirements or procedures.

Feedback

You are invited to give your view of the service that you have received from the National Research Ethics Service and the application procedure. If you wish to make your views known please use the feedback form available on the website.

Further information is available at National Research Ethics Service website > After Review

11/WS/0041	Please quote this number on all correspondence

With the Committee's best wishes for the success of this project.

Yours sincerely

Evelyn Jackson

for **Dr Brian Neilly**
Chair

Enclosures: *List of names and professions of members who were present at the meeting and those who submitted written comments*
"After ethical review – guidance for researchers"

Copy to: *Dr Erica Packard, R&D Office, Tennent Building, Western Infirmary*
Miss Vanessa Watt

COPY FOR YOUR INFORMATION

WoSRES
West of Scotland Research Ethics Service

NHS Greater Glasgow and Clyde

West of Scotland REC 4
Ground Floor, Tennent Building
Western Infirmary
38 Church Street
Glasgow
G11 6NT
www.nhsggc.org.uk

Dr Sarah Wilson
Senior Lecturer in Health Psychology
University of Glasgow
Department of Mental Health and Wellbeing
Administration Building
Gartnavel Royal Hospital
Glasgow
G12 0XH

Date 29 September 2011
Direct line 0141-211-1722
Fax 0141-211-1847
e-mail evelyn.jackson@ggc.scot.nhs.uk

Dear Dr Wilson

Full title of study:	**The feasibility and acceptability of a narrative therapy group approach for adolescents with Type 1 diabetes: A pilot study**
REC reference number:	**11/WS/0041**

Thank you for your letter. I can confirm the REC has received the documents listed below as evidence of compliance with the approval conditions detailed in our letter dated 2 September 2011. Please note these documents are for information only and have not been reviewed by the committee.

Documents received

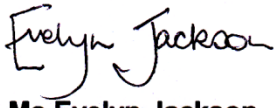
The documents received were as follows:

Document	Version	Date
Covering Letter	-	-
Interview Schedules/Topic Guides	1	12 September 2011
Participant Information Sheet	3	12 September 2011
Participant Information Sheet: Parent/Guardian	3	12 September 2011
Participant Information Sheet: Experienced Patient	3	12 September 2011

You should ensure that the sponsor has a copy of the final documentation for the study. It is the sponsor's responsibility to ensure that the documentation is made available to R&D offices at all participating sites.

11/WS/0041	Please quote this number on all correspondence

Yours sincerely



Ms Evelyn Jackson
Committee Co-ordinator

Copy to: Dr Erica Packard, R&D Office, Tennent Building, Western Infirmary
Miss Vanessa Watt

Appendix 2.3: Participant Information Sheet

Vanessa Watt (Researcher)
Trainee Clinical Psychologist
Department of Mental Health and Wellbeing
Gartnavel Royal Hospital
Glasgow
Email: v.watt.1@research.gla.ac.uk
Telephone: 0141 211 0607

Information Sheet, Version 3 (Participant)

Title: **Narrative Therapy Group for Adolescents with Type 1 Diabetes: A Pilot Study**

I would like to invite you to take part in my research study. My name is Vanessa Watt and I am a Trainee Clinical Psychologist working in the NHS. As part of my training, I am completing a research project and I am interested in your experiences of living with Diabetes. Before you decide if you would like to take part, it is important that you understand why the research is being done and what it will involve.

What is the Research About?

I am planning to run a group for adolescents who have Type 1 Diabetes and who have had an HbA1c level of 8 or more over the past 8 months. We know that sometimes attending therapeutic groups can be helpful for adolescents and my research is looking to see if this is the case for individuals with Diabetes.

The research will involve looking at differences between those who attend a therapeutic group and those who continue to receive their normal treatment at the diabetes clinic.

Why have I been asked to take part?

I am interested in involving adolescents aged 12-15 in this study and you have been identified by the nursing staff at The Royal Hospital for Sick Children (RHSC) as being someone who would meet my criteria.

Do I have to take part?

No you do not have to take part.
If you did decide to take part, you are allowed to withdraw at any point.

What does taking part involve?

- You will be asked to complete the opt-in form provided with this information sheet.
- Once you have opted in to the research you will be contacted by a member of the research team and will be asked to complete a consent sheet. Before you fill this in you will be given the chance to ask any questions.
- You will be randomly allocated to either the treatment group or the control group. You have a 50% chance of being in either group. **If you are in the control group, you will not attend the narrative therapy group.**

- Those allocated to the treatment group will be asked to attend a two hour group. This will take place between 3 pm and 5 pm at RHSC. The group will also be attended by approximately 4 other adolescents and will be run by myself and Dr Liz Hunter, Clinical Psychologist. There will also be two older adolescents there who we will refer to as “experienced patients”. These are individuals who have previously struggled to control their Diabetes but who are now coping better. At least 2 weeks notice will be given before the group is due to happen.

- Those within the control group will not be required to attend the group however will be asked to complete two questionnaires at roughly the same time as the intervention group and then asked to complete the questionnaire again approximately 3 months later.

PLEASE NOTE: You will be asked to attend your routine clinic appointments as usual. There will be no disruption to the normal care you receive. If the group is found to be helpful, then those in the control group will be offered the treatment once the research study has been completed.

What are the possible benefits of taking part?

This is an opportunity to participate in a unique experience. It is possible that there may be some benefits of attending the group such as an improvement in how you feel, an increase in your confidence in coping with your illness and potentially it may help you to keep your HbA1c level within the desired range.

What are the possible risks of taking part?

There are no direct risks of taking part although it is possible that the group and/or questionnaires may make you think about your diabetes and your ways of coping with this illness. If we are worried about your well being, we would ask you if you wanted us to let the diabetes team know and further support could be offered to you from the dedicated Psychology team at the RHSC.

What will happen to the information collected?

All the information collected will remain confidential within the NHS. The results will be written up within a report but no names will be included and all information will be anonymised. I will send you a short summary of the research findings once the research has been completed.

The findings will hopefully help health professionals to provide a better service for people who are in a similar position to you.

Who has reviewed the study?

The University of Glasgow and the NHS are both supportive of this research. Approval has been gained from the West of Scotland Research Ethics Committee 4.

If you have any further questions?

You will be able to keep a copy of this information sheet and you will be able to keep a copy of the consent sheet. If you would like more information on the study and wish to speak to someone not closely linked to the study please contact Dr Andrew Gumley on 01412110607.

If you are interested in taking part?

If you would be willing to take part in the research, please complete the opt-in form and ask your parent/guardian to sign it also. Then please return it in the stamped addressed envelope provided (no stamp required).

If you would prefer please contact Gavin Allison, Diabetes Nurse at RHSC and let him know that you would be interested in being involved in the research (telephone number: 01412010331).

Thank you for reading this information sheet

Appendix 2.4: Parent/Guardian Information Sheet

Information Sheet, Version 3 (Parent/Guardian)

Title: **Narrative Therapy Group for Adolescents with Type 1 Diabetes: A Pilot Study**

I would like to invite your son/daughter to take part in my research study. My name is Vanessa Watt and I am a Trainee Clinical Psychologist working in the NHS. As part of my training, I am completing a research project and am interested in your adolescent's experiences of living with diabetes. As your child is under the age of 16 it is important that I gain the consent from a parent/guardian as well as from the adolescent themselves.

I have provided some information below relating to my study and have provided my contact details for you to get in touch if you have questions about the study.

What is the Research About?

We are running a group for adolescents who have had an HbA1c measure of 8% or more over the past 8 months. We know that sometimes participating in educational or psychological groups can be helpful for adolescents and my research is looking to see if this is the case for those with Type 1 diabetes.

Why has my child been asked to take part?

We would like adolescent's aged 12-15 to be involved in this study. Your child has been identified as meeting the criteria for my research by the nurses who are supporting this research.

Does my child have to take part?

No your child does not have to take part in the study. All participation is on a voluntary basis and consent can be withdrawn at any point during the project.

What will happen next?

- You and your child will be asked to complete the opt-in form provided with this sheet.
- Once the opt-in form has been completed, a member of the research team will contact you and both yourself and your child will be asked to complete a consent sheet. Before you complete this you will be given the chance to ask any questions.
- Your son/daughter will be randomly allocated to either the treatment group or the control group. They will have a 50% chance of being in either group. **If your son/daughter is allocated to the control group they will not attend the narrative therapy group.**
- Those allocated to the treatment group will be asked to attend a two hour group. This will take place between 3pm and 5pm at RHSC. The group will also be attended by approximately 4 other adolescents and will be run by myself and Dr Liz Hunter, Clinical Psychologist. There will also be two older adolescents there who we will refer to as "experienced patients". These are individuals who have previously struggled to

control their Diabetes but who are now coping better. At least 2 weeks notice will be given before the group is due to happen.

- Those within the control group will not be required to attend the group however will be asked to complete two questionnaires at roughly the same time as the treatment group and then asked to complete the questionnaire again approximately 3 months later.

- **PLEASE NOTE**: Your son/daughter will be asked to attend their routine clinic appointments as usual. There will be no disruption to the normal care they receive. If the group is found to be helpful, then those in the control group will be offered the treatment once the research study has been completed

What are the possible benefits of taking part?

The group will allow your child to meet with others who also have Type 1 diabetes. They will have an opportunity to share their experiences and also to reflect on the experiences of others. The group will be based on a psychological approach called Narrative Therapy. This approach has been shown to be helpful in helping children and adolescents with chronic illness.

What are the possible risks of taking part?

There are no direct risks of taking part however the group may encourage your son/daughter to reflect on their experiences of having diabetes and this may be upsetting for them. If we are worried about the wellbeing of any participants we would be able to refer them to the Psychology Team at RHSC for further support.

What will happen to the information collected?

All the information collected will remain confidential within the NHS. The results will be written up within a report however your child's name will not be added at any point and instead all information will be anonymised. I will ensure that a summary of the main findings is sent to you following the completion of the research.

Who has reviewed the study?

The University of Glasgow and the NHS are both supportive of this research. Approval has been gained from the West of Scotland Ethics Committee 4.

If you have any further questions?

You will be able to keep a copy of this information sheet and you will be able to keep a copy of the consent sheet. If you would like more information on the study and wish to speak to someone not closely linked to the study please contact Dr Andrew Gumley on 01412110607.
If you are interested in taking part?

If you would be willing for your son/daughter to take part in the research, please complete the opt-in form and return it to the above address.

If you would prefer, please contact Gavin Allison, Diabetes Nurse at RHSC and let him know that you would be interested in your son/daughter being involved in the research (telephone number: 0141 201 0331). **Thank you for reading this information sheet.**

Appendix 2.5: Participant Opt-in form

OPT-IN FORM, Version 1 (Participant)

Please complete this form if you are interested in being involved in this research study.

Please complete the form below and return it to the above address. If you would prefer, please contact Gavin Allison at The Royal Hospital for Sick Children (RHSC) to let us know you would be interested in being involved (Telephone Number: 0141201 0331).

I am happy for a member of the research team to contact me by (you can tick more than one)

Telephone ☐ Please provide telephone number: _____

Email ☐ Please provide email address: _____

Letter ☐

Name: _____

Signature: _____

Date: _____

Parent/Guardian Signature: _____

Date: _____

Appendix 2.6: Participant Consent Form

Consent Form, Version 2 (Participant)

Title: Narrative Therapy Group for Adolescents with Type 1 Diabetes: A Pilot Study

Please initial each box:

I confirm that I have read and understood the participant information sheet for the above study and I have been given the opportunity to ask any questions I might have. ☐

I understand that I do not have to take part in this study. It is my choice and I can stop at any time, without giving a reason and this will not affect any aspect of my care. ☐

I understand that all information will be confidential and there will be nothing to identify me as having taken part in the study. ☐

I agree to the researcher having access to my HbA1c measures from my last two clinic appointments and also access to my next two HbA1c measures taken at clinic. ☐

I agree to keep all information discussed within the group confidential. ☐

I agree to take part in the above study. ☐

Name: _____

Signature: _____

Name of Researcher: _____

Signature of Researcher: _____

Date: _____

Appendix 2.7: Parent/Guardian Consent Form

Consent Form, Version 2 (Parent/Guardian)

Title: Narrative Therapy Group for Adolescents with Type 1 Diabetes: A Pilot Study

Please initial each box:

I confirm that I have read and understood the information sheet for the above study and I have been given the opportunity to ask any questions I might have. ☐

I understand that my son/daughter does not have to take part in this study. They will be able to withdraw their consent at any time, without giving a reason and this will not affect any aspect of their care. ☐

I understand that all information will be confidential and there will be nothing to identify my son/daughter as having taken part in the study. ☐

I agree to the researcher having access to my son/daughters HbA1c measures from their last two clinic appointments and also for the researcher to have access to their next two HbA1c measures which are taken at clinic. ☐

I agree for my son/daughter to take part in the above study. ☐

Name: _____

Signature: _____

Name of Researcher: _____

Signature of Researcher: _____

Date: _____

Appendix 2.8: Experienced Patient Information Sheet

Information Sheet, Version 3 (Experienced Patient)

Title: **Narrative Therapy Group for Adolescents with Type 1 Diabetes: A Pilot Study**

I would like to invite you to become involved in my research study. My name is Vanessa Watt and I am a Trainee Clinical Psychologist working in the NHS. As part of my training, I am completing a research project and I am interested in adolescent's experiences of living with Type 1 diabetes. Before you decide if you would like to take part, it is important that you understand why the research is being done and what it will involve.

What is the Research About?

I am planning to run a group for adolescents who have Type 1 diabetes and who have had an HbA1c level of 8 % or more over the past 8 months. We know that sometimes attending therapeutic groups can be helpful for adolescents and my research is looking to see if this is the case for individuals with Diabetes.

The research will involve looking at differences between those who attend a therapeutic group and those who continue to receive their normal treatment at the diabetes clinic.

The group will be based on a psychological therapy called Narrative Therapy. It will involve sharing your experiences of living with diabetes and reflecting on the experiences of others. It will be a structured approach and will be led by myself and a Clinical Psychologist, Dr Liz Hunter.

Why have I been asked to take part?

You have been asked to be involved in the research as you have been identified by the diabetes nursing team as someone who may have previously had an HbA1c level above 8% but who is now managing their condition well.

Do I have to take part?

No you do not have to take part.
If you did decide to take part, you are allowed to withdraw at any point.

What does taking part involve?

You will be asked to attend up to 3 different groups, each lasting a total of 2 hours. The research team will try to find a time that is suitable for you and will ensure that plenty of notice is provided prior to the group starting.

You will be asked to complete a consent sheet prior to the group and will be asked to keep all information discussed within the group session confidential. This will mean that you will be asked not to talk about the specific details of the group with your friends or family. This ensures that all participants feel safe to share their experiences and know that the information discussed will not go any further.

What are the possible benefits of taking part?

This is an opportunity to be involved in a unique experience. The group may help you to reflect on your experiences of living with diabetes and may also encourage you to think about the progress you have made over the years.

Your valuable input within this research, may help others to reflect on their experiences and may help them to think of alternative ways of coping.

What are the possible risks of taking part?

There are no direct risks of taking part although it is possible that the group may make you think about your diabetes and your ways of coping with this illness. If we are worried about your well being, we would ask you if you wanted us to let the diabetes team know and further support could be offered to you from the Psychology team.

Who has reviewed the study?

The University of Glasgow and the NHS are both supportive of this research. Approval has been gained from the West of Scotland Ethics Committee 4.

If you have any further questions?

You will be able to keep a copy of this information sheet and you will be able to keep a copy of the consent sheet. If you would like more information on the study and wish to speak to someone not closely linked to the study please contact Dr Andrew Gumley on 01412110607.

If you are interested in taking part?

If you would be willing to take part in the research, please complete the opt-in form and return it in the stamped addressed envelope provided (no stamp required).

If you would prefer, please contact Gavin Allison at RHSC and let him know you would be interested in being involved in the research (telephone number: 0141 201 0331).

Thank you for reading this information sheet

Appendix 2.9: Experienced Patient Opt-in form

OPT-IN FORM, Version 1 (Experienced Patient)

Please complete this form if you are interested in being involved in this research study.

Please complete the form below and return it in the stamped addressed envelope provided (you do not need to add a stamp). If you would prefer, please contact Gavin Allison, Diabetes Nurse at The Royal Hospital for Sick Children (RHSC) to let us know you would be interested in being involved (Telephone Number: 0141 201 0331)

I am happy for a member of the research team to contact me by (you can tick more than one)

Telephone ☐ Please provide telephone number: _____

Email ☐ Please provide email address: _____

Letter ☐

Name: _____

Signature: _____

Date: _____

Appendix 2.10: Experienced Patient Consent Form

Consent Form, Version 2 (Experienced Patient)

Title: Narrative Therapy Group for Adolescents with Type 1 Diabetes: A Pilot Study

Please initial each box:

I confirm that I have read and understood the information sheet for the above study and I have been given the opportunity to ask any questions I might have. ☐

I understand that I do not have to take part in this study. It is my choice and I can stop at any time, without giving a reason and this will not affect any aspect of my care. ☐

I understand that all information will be confidential and there will be nothing to identify me as having taken part in the study. ☐

I agree to keep all information discussed within the group confidential. ☐

I agree to take part in the above study. ☐

Name: _____

Signature: _____

Name of Researcher: _____

Signature of Researcher: _____

Date: _____

Appendix 2.11: Problem Areas in Diabetes-Teen Version (PAID-T)

IDENTIFYING YOUR PROBLEM AREAS IN DIABETES - TEEN VERSION (PAID-T)

Name:_____ Age:_____ Sex: M__ F __
How old were you when your diabetes was diagnosed?_____
Today's date _____

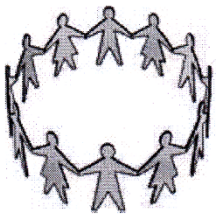
DIRECTIONS: Living with diabetes can sometimes be difficult. In day-to-day life, there may be many problems and hassles with your diabetes. The problems may range from minor hassles to major life difficulties. Listed below are a variety of possible problem areas which people with diabetes may have. Think about how much each of the items below may have upset or bothered you **DURING THE PAST MONTH** and circle the appropriate number.

Please note that we are asking you how much each item may be bothering you in your life, **NOT** whether the item is merely true for you. If you feel that an item is not a bother or a problem for you, you would circle "1". If it very bothersome to you, you would circle "6".

	Not A Problem		Moderate Problem		Serious Problem	
1. Feeling sad when I think about having and living with diabetes.	1	2	3	4	5	6
2. Not knowing if the mood or feelings I am having are related to my blood sugar levels.	1	2	3	4	5	6
3. Feeling overwhelmed by my diabetes regimen.	1	2	3	4	5	6
4. Feeling angry when I think about having and living with diabetes.	1	2	3	4	5	6
5. Feeling constantly concerned about food and eating.	1	2	3	4	5	6
6. Worrying about the future and the possibility of serious complications.	1	2	3	4	5	6
7. Feeling upset when my diabetes management is "off track."	1	2	3	4	5	6
8. Feeling "burned-out" by the constant effort to manage diabetes.	1	2	3	4	5	6
9. Feeling that I am not checking my blood sugars often enough.	1	2	3	4	5	6
10. Feeling unclear about exactly what or how much I should be doing to take care of my diabetes properly.	1	2	3	4	5	6

11. Not feeling motivated to keep up with my daily diabetes tasks.	1	2	3	4	5	6
12. Feeling discouraged or defeated when I see high blood sugar results on my meter.	1	2	3	4	5	6
13. Feeling that my friends or family act like "diabetes police" (e.g. nag about eating properly, checking blood sugars,not trying hard enough).	1	2	3	4	5	6
14. Feeling like my parents don't trust me to care for my diabetes.	1	2	3	4	5	6
15. Feeling I must be perfect in my diabetes management.	1	2	3	4	5	6
16. Missing or skipping blood sugar checks.	1	2	3	4	5	6
17. Feeling that my blood sugars are often swinging wildly, no matter how hard I try.	1	2	3	4	5	6
18. Feeling that I am often failing with my diabetes regimen.	1	2	3	4	5	6
19. Feeling like my parents blame me for blood sugar numbers they don't like.	1	2	3	4	5	6
20. Feeling that my friends or family don't understand how difficult living with diabetes can be.	1	2	3	4	5	6
21. Feeling that I can't control my eating.	1	2	3	4	5	6
22. Worrying about my weight.	1	2	3	4	5	6
23. Worrying that diabetes gets in the way of having fun and being with my friends.	1	2	3	4	5	6
24. Fitting my diabetes regimen into my day when I'm away from home (e.g. school, work, etc.).	1	2	3	4	5	6
25. Worrying about getting low during a sports activity.	1	2	3	4	5	6
26. Feeling like my parents worry about complications too much.	1	2	3	4	5	6

Appendix 2.12: Self-Efficacy for Diabetes Scale



STANFORD
PATIENT EDUCATION
RESEARCH CENTER

Self-Efficacy for Diabetes

We would like to know how confident you are in doing certain activities. For each of the following questions, please choose the number that corresponds to your confidence that you can do the tasks regularly at the present time.

1. How confident do you feel that you can eat your meals every 4 to 5 hours every day, including breakfast every day?

2. How confident do you feel that you can follow your diet when you have to prepare or share food with other people who do not have diabetes?

3. How confident do you feel that you can choose the appropriate foods to eat when you are hungry (for example, snacks)?

4. How confident do you feel that you can exercise 15 to 30 minutes, 4 to 5 times a week?

5. How confident do you feel that you can do something to prevent your blood sugar level from dropping when you exercise?

6. How confident do you feel that you know what to do when your blood sugar level goes higher or lower than it should be?

7. How confident do you feel that you can judge when the changes in your illness mean you should visit the doctor?

8. How confident do you feel that you can control your diabetes so that it does not interfere with the things you want to do?

not at all confident | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | totally confident

Appendix 2.13 Individual participant scores pre- and post- intervention.

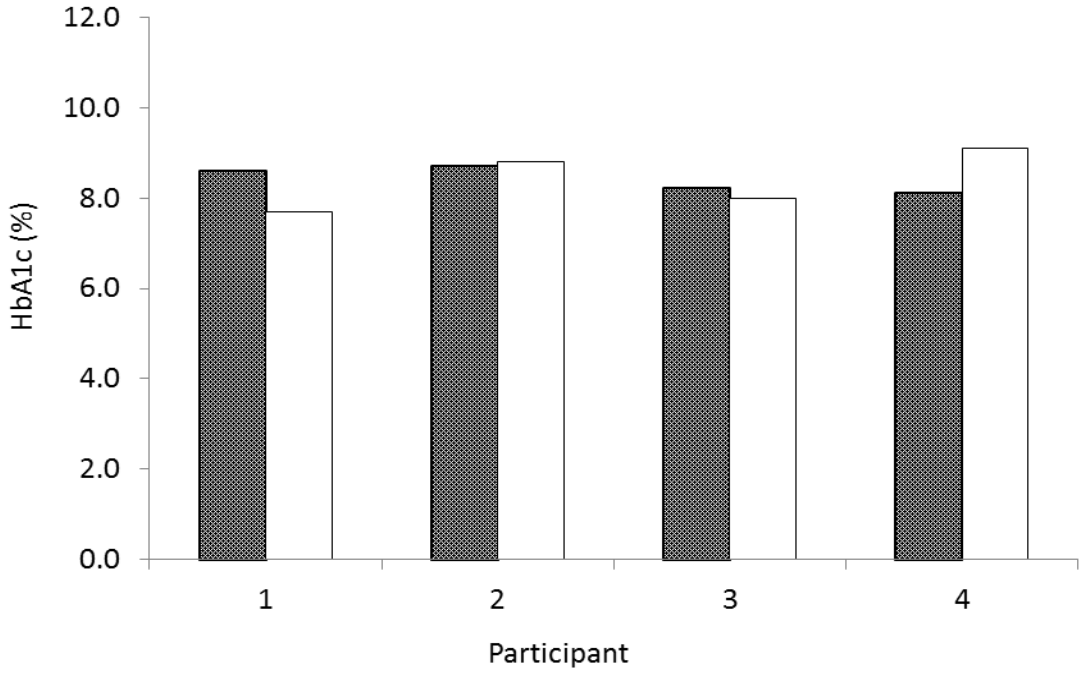


Figure 1A. Individual HbA1c scores for pre- (▩) and post- (□) intervention for participants in the control group

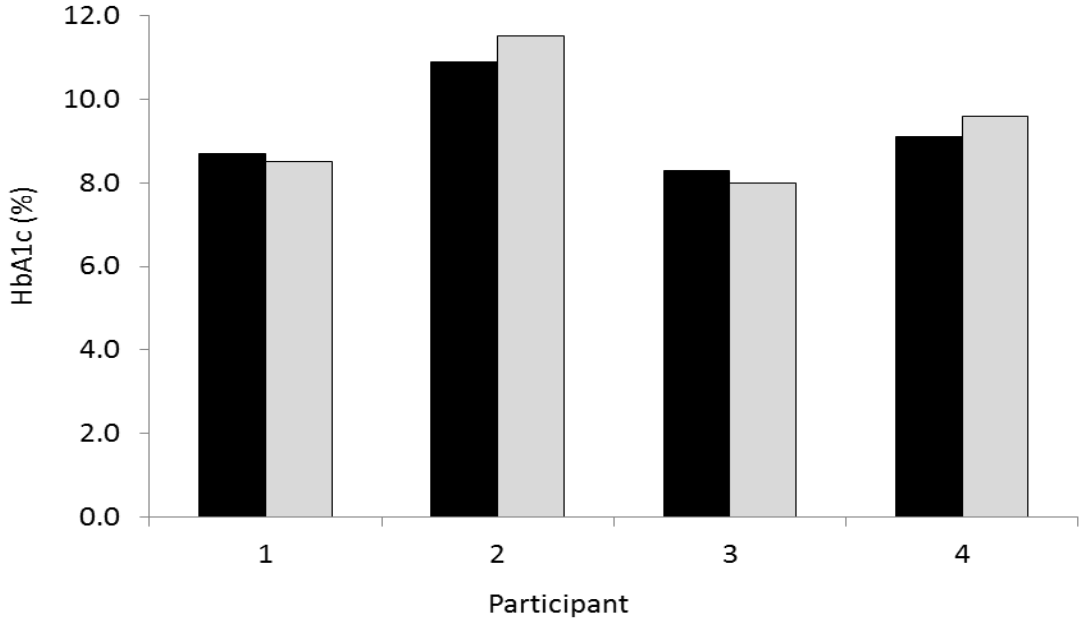


Figure 1B. Individual HbA1c scores for pre- (■) and post- (□) intervention for participants in the intervention group

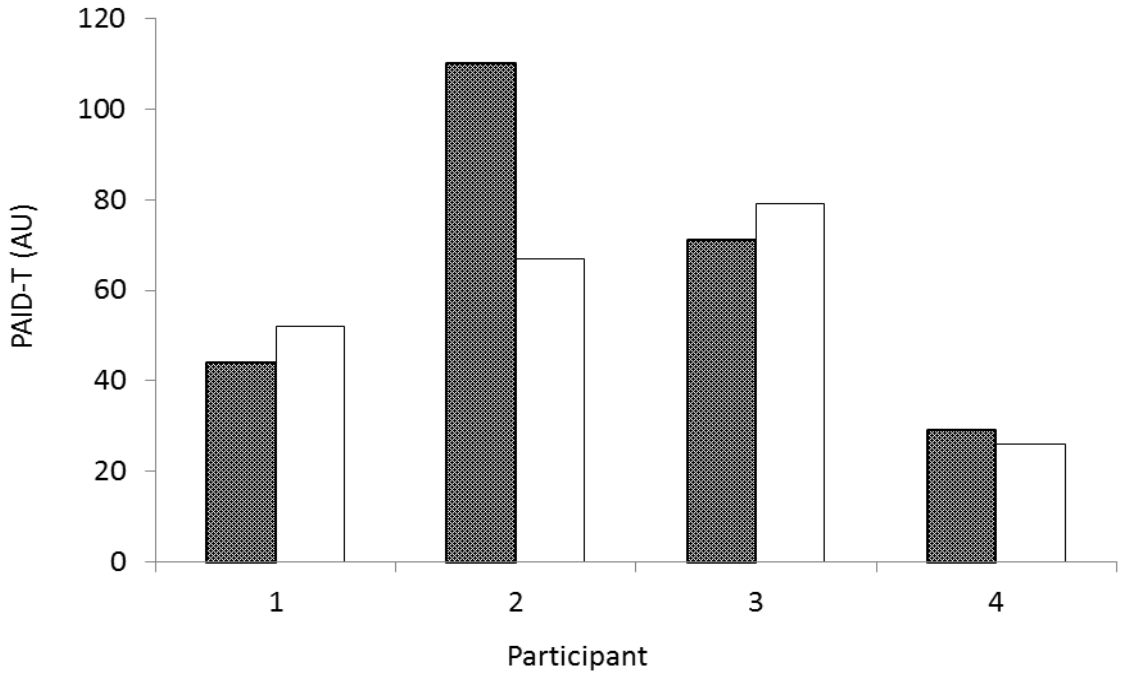


Figure 2A. Individual PAID-T scores for pre- (▩) and post- (□) intervention for participants in the control group

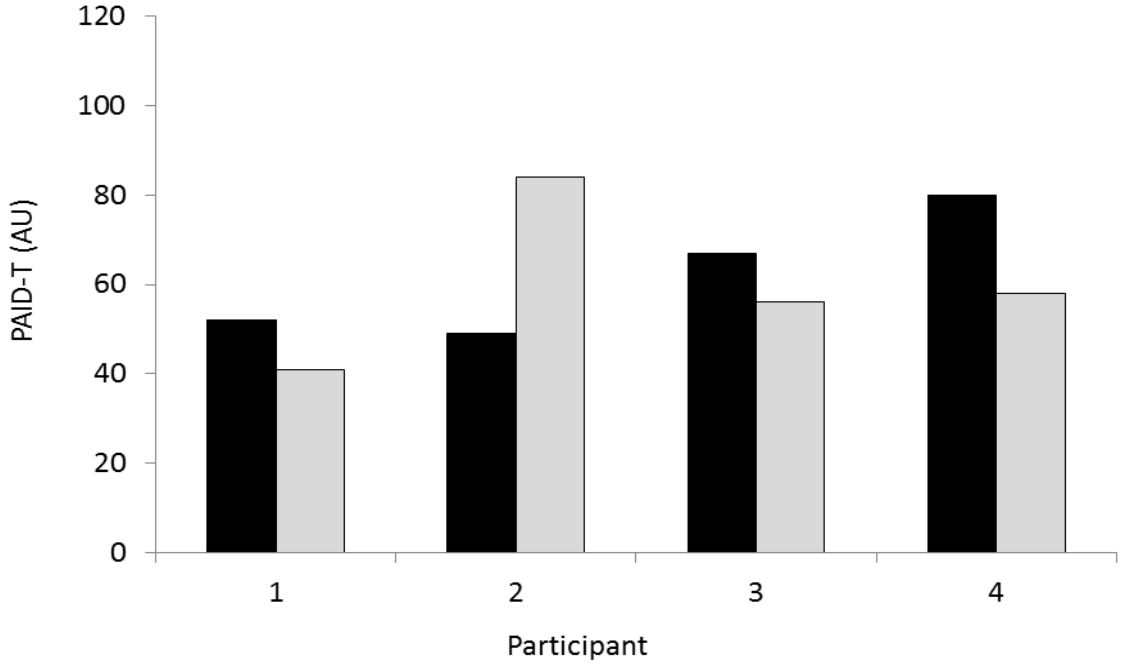


Figure 2B. Individual PAID-T scores for pre- (■) and post- (□) intervention for participants in the intervention group

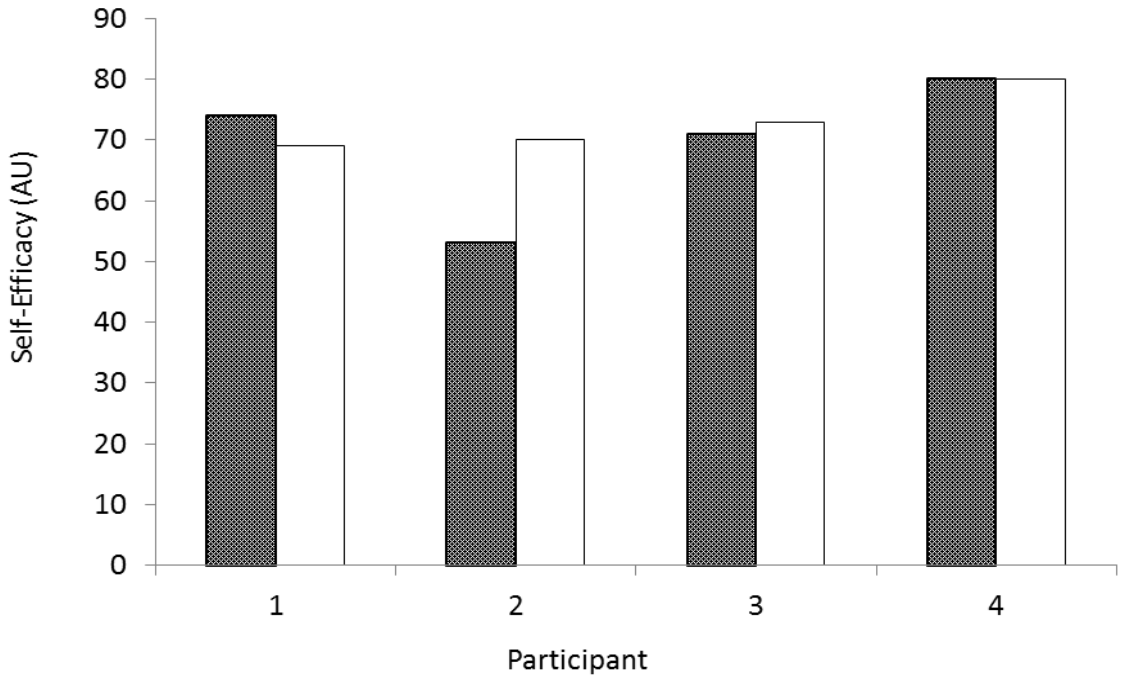


Figure 3A. Individual Self-Efficacy scores for pre- (▩) and post- (□) intervention for participants in the control group

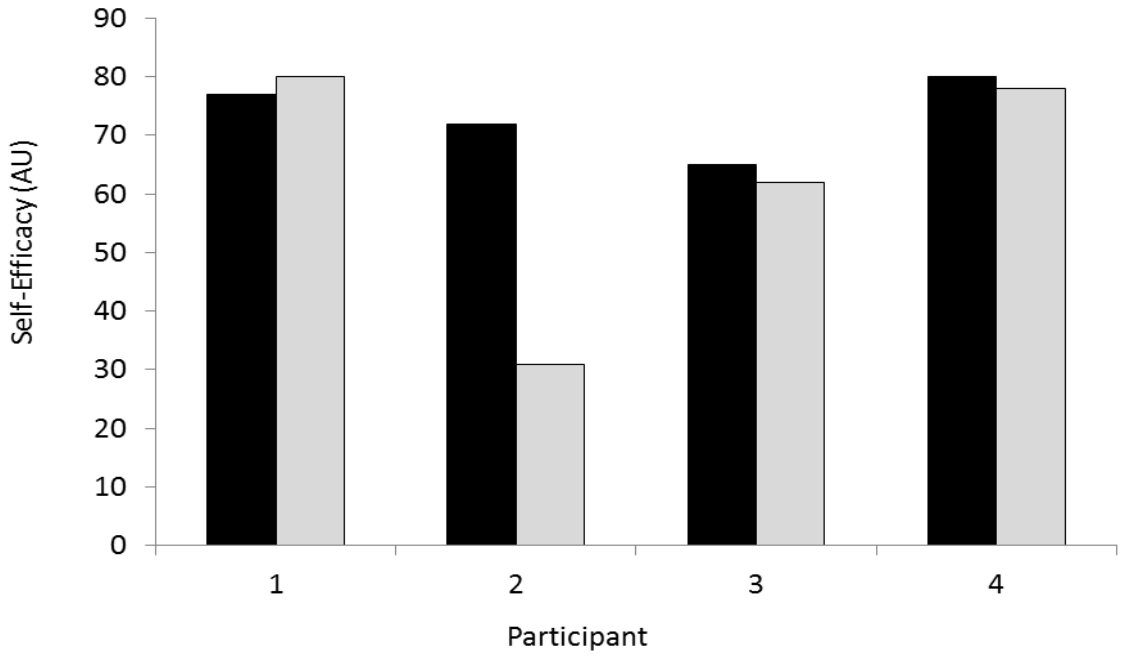


Figure 3B. Individual Self-Efficacy scores for pre- (■) and post- (□) intervention for participants in the intervention group.

Appendix 2.14: Semi-Structured Interview Schedule

1. What made you decide to agree to attend the group?

2. How did you feel before you came to the group? Did you have any worries or concerns about being involved?

3. How did you feel after the group?

4. What do you remember in particular about the group?

5. What did you think was the best thing about the group?

6. Has the group made you think differently about having diabetes? In what way?

7. Have you made any changes to the way you manage your diabetes since the group?

8. Do you think it was good to just have a one off group or would you have preferred to attend for a number of group sessions?

9. What was it like listening to and hearing from the experienced patients?

10. How old do you think the experienced patients should be? Does age matter?

11. Would you recommend the group to other teenagers? How you think we could encourage more teenagers to participate in a group like this?

12. How do you think we could make the group better?

Appendix 2.15: Example of Interview Extract and Coding

TRANSCRIPTION EXTRACT	CODING/NOTES
I: What made you decide to take part in the group?	
P: After I read all the information I was given I talked it through with my mum and we thought it would be a good idea, just to see what it was like and em it just sounded good	Parental influence?
I: How were you feeling before you came to the group? Were you worried or nervous?	
P: Yeah I was nervous because I wasn't sure what was going to happen but once I got there it was fine, it was relaxing	Apprehension, Nervous Relief?
I: What were your thoughts and worries about coming along?	
P: Just what was going to be asked and what everyone was going to be like	Uncertainty, apprehension, peer reactions?
I: How did you feel after the group?	
P: It felt really good, I felt like I learnt a lot of stuff and it was reassuring to know I was not the only person who went through what I have been through, there were other people who have been through what I have been through	Reassuring Relief Others have been through similar things Shared understanding
I: What do you remember in particular about the group?	
P: Just everyone telling their stories and how they all went through rough patches and rebellious years and I can kind of sympathise with that because I did the same thing	Others stories Difficulties and rebellion Similar situations-high levels of sympathy and empathy
I: What do you think was the best thing about the group?	
P: Just hearing each individual stories and just knowing you are not alone and just knowing that there is someone else out there because sometimes you can feel isolated, so it was just good hearing everyone's stories	Not being alone Feeling less isolated Shared understanding of what it is like to have diabetes
I: Has the group made you think differently about your diabetes?	
P: Yeah cause a couple of the stories I was quite shocked as they let it get so bad and em they put themselves in danger but I didn't want to do that so it kind of made me wisen up.	Wake up call- shock Wise-up
I: Do you think it has made you change anything about the way you try to manage your diabetes?	
P: Yeah I am eating better, I am doing more exercise and I am just making better choices about my diabetes	Rethink ways of managing condition Change in self-management?

Appendix 2.16: Major Research Proposal

Abstract

Background

Diabetes is the third most common chronic illness in childhood following asthma and cerebral palsy (Jones, 2002). During adolescence, metabolic control can often worsen and if not addressed can lead to significant long term health consequences (Dabadghao et al, 2001). Educational group approaches to working with adolescents with diabetes have indicated beneficial effects in relation to management outcomes (Hampson et al, 2001). There has however been criticism that programmes such as the expert patient programme has tended to attract those who are already good self-managers of their diabetes and thus was failing to reach those people who might benefit the most from intervention (Kennedy, 2005).

A novel group approach drawing on narrative therapy was undertaken at the University College London Hospital to work with adolescents in an inpatient service presenting with symptoms of pain and fatigue (Christie, D et al, unpublished). This narrative approach involved a one off workshop utilising outsider witnesses to explore the lived experiences of these individuals and reflect on both the challenges they face and the values and skills that they have.

Aims

The aim of the present research study is evaluate the feasibility of a narrative therapy group workshop for adolescents who are struggling to control their diabetes.

Methods

A total of 15 adolescents and 15 controls will be recruited through Royal Hospital for Sick Children (RHSC). This will be a quantitative study which will evaluate the effectiveness of a group approach by assessing self-efficacy, diabetes related emotional distress and HbA1c levels in participants both prior to and after the intervention. The acceptability of the approach will be measured via an evaluation questionnaire and through a semi structured interview with participants following the group.

Applications

The research will be aimed at those who are struggling most to manage their diabetes. The primary purpose of this study is to assess whether or not a narrative therapy group approach for adolescents is a feasible and acceptable addition to their current treatment. The consequences of poor management of diabetes have been widely documented and therefore there is a value to exploring the role of psychological therapy in improving both the short term and long term outcomes for this population. Overall, this study will add to the evidence base for psychological interventions for adolescents with Type 1 diabetes.

Introduction

Diabetes in Adolescence

Diabetes is the third most common chronic illness in childhood following asthma and cerebral palsy (Jones, 2002). It can be extremely difficult to manage as patients must learn how to maintain the balance between insulin dosage, diet and activity (Waller, 2004). Furthermore, during adolescence, metabolic control worsens and if not addressed, can lead to significant long term health consequences (Dabadghao et al, 2001). During this period of transition from childhood to adolescence, peer relationships become central to the individual's sense of identity. For those with a diagnosis of diabetes the restrictions placed upon them can impact on their sense of belonging within a peer group and as a result some will go on to neglect health regimes and self care in favour of peer group acceptance (Kyngas et al, 1998).

Adjustment and Adherence Issues

Malik and Koot (2009) endeavoured to understand and explain adjustment in adolescents with type 1 diabetes. They found that both diabetes related stress and general stress were critical predictors of adjustment within this population. They also revealed that diabetes related stress could potentially displace the effects of protective factors and thus could play a central role in the development of maladjustment in adolescents with Type 1 diabetes. In addition, diabetes related stress was found to fully mediate the relationship between metabolic control and quality of life and wellbeing. The authors emphases the value of targeting diabetes related distress in clinical interventions.

Current psychological treatment of diabetes

Individuals with type I diabetes are usually managed on an outpatient basis and receive input from a medical consultant, specialist nurse and a dietician (Hampson et al, 2001). In addition to the medical management of diabetes, there are recommendations that educational and psychosocial interventions should also be offered as an integral part of diabetes care (Gage et al, 2004). There is a growing awareness of the importance of identifying effective psychological interventions that can help to optimise both glycemic control and quality of life particularly during the transitional period of adolescence (Gage et al, 2004 & Van der Ven, 2003).

A systematic review of educational and psychosocial interventions with adolescents with Type I diabetes was undertaken by Hampson et al, (2001). A total of 62 studies were included for evaluation. 25 of these studies were randomised controlled studies and effect sizes were calculated for 14 of these. The results indicated small to medium effect sizes for these interventions. A narrative review of 21 pre-post studies with no control group was performed. All of the studies reported beneficial effects of the group approaches in relation to diabetes management outcomes. The authors highlighted that very few of these studies addressed the economic considerations of running such groups. They acknowledged however, that targeting poorly controlled individuals may reduce hospitalisations and future complications and as a result would prove to be more cost effective than generic interventions (Hampson et al, 2001).

Expert Patients

In 2001 the Department of Health published a document entitled "The expert patient: a new approach to chronic disease management for the 21st century". The key theme from this document was that patients are experts in managing their disease and have a considerable amount to contribute to the treatment process. One key example of this was the introduction of self management programmes which were envisaged to help reduce severity of symptoms and improve confidence, resourcefulness and self efficacy of those living with chronic illness (Tattersall 2002).

The chronic disease self management programme was initially developed in the USA and has since been adopted by a number of countries including the UK. Within the UK this has become known as the "Expert Patient Programme". The UK concept of expert patient derives from the assumption that individuals affected by chronic illness are likely to develop expertise in managing their condition and this expertise is likely to be very different in nature to the knowledge of health professionals (Wilson et al, 2007).

The expert patient programme is modelled on the work of Kate Lorig who established the chronic disease management programme in the USA. This programme consists of 6 consecutive sessions of 2.5 hours each. These programmes are led by trained individuals who are living with chronic illness. Initially, the programmes were offered as generic courses open to anyone living with any form of chronic illness (Wilson et al, 2007). Whilst this format of the course was valued by some, evidence was emerging that there was a need for condition specific courses particularly for those living with diabetes (Kennedy, 2005).

Evaluation of the Expert Patient programme reported that EPP provided patients with moderate gains in self efficacy, improvements in quality of life and gains in secondary outcomes including psychological wellbeing (Kennedy, 2007). However EPP was criticised due to the fact that it appeared to be attracting those who were already good self-managers and was failing to reach those people who might benefit the most (Kennedy, 2005).

Narrative Approaches

In recent years, patient education for the self management of diabetes and other chronic diseases has undergone considerable changes. It is no longer enough to offer directive and informative education. We have become more aware that adopting healthy habits depends less on information and skills and more on personal intrinsic motivation to make and sustain changes (Piana et al, 2010). It is therefore important to think of creative and alternative ways to engage with teenagers to increase their motivation to improve their diabetic control and to help them to make sense of their illness.

Many of the concepts of narrative therapy were introduced by Epson and White and encapsulate many different therapeutic themes. In essence, narrative therapy promotes the belief that people are experts in their own lives. It views problems as separate from people and assumes that people have many skills, competencies, beliefs, values and abilities that will assist them to reduce the influence the problem has over their lives (Morgan, 2000). Underlying Narrative therapy is the premise that as humans we are always seeking ways of interpreting our world. In doing this, we create stories about ourselves and others and these then influence the way we lead our lives. Hearing the way in which a person tells their story

provides valuable information about how that individual makes sense of their situation and the limitations these can place upon them.

Piana et al (2010) evaluated the effects of a narrative-autobiographical approach on adolescents with Type I diabetes. Outcomes included self awareness, concern for self care and well being. The approach was underpinned by a narrative perspective which posits that in order to cope with an illness such as diabetes the individual must understand the experience of being ill whilst also finding and assigning meaning to their condition. Indeed, individuals must realise and reinterpret the story of their world and their life in order to increase coping and improve outcomes (Good & Del Vecchio, 1994). Ninety four adolescents with Type I diabetes who attended a nine day summer camp participated in structured daily self writing proposals on diabetes, integrated with daily interactive self management education. Follow up questionnaires allowed for feedback to be obtained on this therapeutic approach. Qualitative research revealed that writing about the discovery of diabetes had been a very liberating effect and had resulted in the change of perception of self, in relationships with others and n the relationship with the disease. The authors conclude that this approach helped adolescents to overcome their feelings of diversity and isolation whilst increasing their self efficacy, acceptance of diabetes as well as their sense of responsibility in self management (Piana et al, 2010).

Background and rationale for present study

A novel group approach drawing on narrative therapy has been undertaken at the University College London Hospital to work with adolescents in an inpatient service presenting with symptoms of pain and fatigue (Christie, D et al., unpublished). The authors conducted a one off workshop lasting approximately 2 hours. A total of 8 participants were included. Four of these were current patients within the ward and the remaining 4 were individuals who had previously been inpatients but whom were now managing to cope with the symptoms more effectively. These individuals were known as “experienced consultants” and were included within the group to act as outsider witnesses.

The four experienced consultants were people who had been in a similar situation to those presently on the ward but who were now further along their journey. They had previous personal experience of what it is like to struggle with the challenges facing the inpatients and had “expert” knowledge about how to tackle many of the difficulties the adolescents were facing. They were therefore in a unique position to fulfil this role.

As in the practice of narrative therapy, outsider witnesses are often invited as an audience to a therapy conversation. Outsider witnesses may or may not be known to the individuals within the group and can also vary on their level of knowledge and experience about the therapeutic issue being addressed. The outsider witness role is to listen to the individuals preferred stories or ways of living and helps to reflect what they hear.

The findings from this small research project reported positive outcomes for those individuals within the inpatient ward. This included physical progress, attitudes to their illness and also family reports of their wellbeing were improved (Peer Communication, 2010).

The present research aims to replicate their approach with an adolescent diabetes population to explore whether a similar group could have a positive effect on those who are struggling to manage and control their diabetes.

Aims

The current study is a pilot study which aims to assess the feasibility of conducting a larger controlled trial of this narrative therapy group approach with adolescents with Type 1 diabetes. Specifically the pilot will aim to:

3. Assess if a larger controlled study would be warranted

4. Inform the design of future studies in terms of the "PICO" requirements (SIGN 50):

e) Target **Population**: Confirm the eligibility and suitability of individuals who are likely to benefit from the treatment

f) **Intervention**: Identify any modifications required to the narrative therapy group approach

g) **Control group**: provide detailed information on what treatment as usual involves

h) **Outcomes**: confirm which outcomes may be appropriate to target in future interventions

5. In addition, the study will aim to provide information which will help to inform sample size requirements for future studies.

Research Questions

- What are the potential numbers of participants who fulfil eligibility criteria?

- What proportion of potential participants consent to participate in a narrative therapy group approach?

- Does participation in the narrative therapy group reduce diabetes related distress as measured by the Problem Areas in Diabetes-Teen Version?

- Does participation in the narrative therapy group approach increases self efficacy within this population as measured by the Self Efficacy for Diabetes Scale?

- Does participation in the narrative therapy group have any effects on future HbA1c levels recorded at their next clinic appointment(s)?

- Do participants within the narrative group report the intervention to be an acceptable addition to their treatment as usual and what modifications may be required for future studies?

Plan of investigation

Participants

15 adolescents aged 12-15 with Type 1 diabetes will be recruited from RHSC. The adolescents will have been struggling to manage their diabetes for the past 8 months; this will be defined as an HbA1c level of > 8% at their last two clinic appointments.

2 experienced patients aged 17 and over who have previously struggled to manage their diabetes but who now have good control will be invited to attend the groups as outsider witnesses. The term "experienced patient" was favoured over "experienced consultant" after consultation with the diabetes team at RHSC.

Control Group

15 adolescents aged 12-15 with Type 1 diabetes who have been struggling their diabetes for over 8 months, again this will be defined as an HbA1c level of >8% for the past 8 months. The control group will be asked to complete the two questionnaires at similar time intervals to those who attend the group. The control group will not however attend the narrative group approach but will receive treatment as usual. If the group is deemed to show positive results then the control group will be invited to attend future groups which will be run by the Clinical Psychologist involved in the present study.

Inclusion criteria for participants

- Aged 12-15
- Have had a diagnosis of Diabetes for at least a year
- Are not receiving current psychological input from RHSC
- No known learning disability
- English as their first language
- HbA1c > 8% for at least 8 months
- Currently attending diabetes clinic for Type 1 diabetes within RHSC
- Written consent provided by both participant and their parent/guardian

Inclusion criteria for experienced patients

- Aged 17 and over
- No known learning disability
- English as their first language
- Previously had HbA1c > 8% for at least 8 months
- Has been managing to control their Type 1 diabetes for at least 1 year
- Written consent provided by both participant and their parent/guardian

Inclusion criteria for control group

- Aged 12-15
- Have had a diagnosis of Diabetes for at least a year
- Are not receiving current psychological input from RHSC
- No known learning disability

- English as their first language
- HbA1c >8% for at least 8 months
- Currently attending a diabetes clinic within RHSC

Recruitment process

The principal researcher will liaise with the diabetes nurses at RHSC to identify suitable participants and experienced patients. Once ethical approval has been granted, information sheets will be sent to those who meet the inclusion criteria via the nursing team at RHSC. Potential participants will be asked to complete an opt-in form indicating whether they would be interested in being involved in the research. At this point they will be made aware that this may involve attending the intervention group or completing questionnaires as part of the control group.

Once an adequate number of participants have agreed to take part, individuals will be randomly allocated to either the intervention group or the control group and written consent will be obtained from the adolescent and their parent/guardian.The consent forms will be sent to all of those who have opted in to the research and these sheets will be also sent out via the nursing team at RHSC.

In total, 3 intervention groups will be run. Each group will be made up of 5 adolescent participants and two experienced patients. Participants will be provided with a minimum of 2 weeks notice before the group.

Potential experienced patients will be approached by either their direct health care team or by the Clinical Psychologist working within RHSC. These individuals will be identified jointly by the nurses at RHSC and those working within the transition teams at either Victoria Infirmary or Stobhill Hospital in Glasgow. Potential experienced patients will be provided with an information sheet and an opt-in form which they will be asked to complete if they are willing to be involved in the research. At this point, a consent sheet will be sent out to those who have opted in and potential participants will be asked to provide written consent to take part. As these individuals will be 17 or older, parental consent will not be required.

Measures

HbA1c which is routinely measured in the clinic will provide information on patients levels of diabetic control both pre and post intervention.

Participants will be asked to complete 2 short questionnaires prior to starting the group, and at 3 month follow up. The questionnaires to be used are titled below:

- Problem areas in Diabetes-Teen Version (Weissberg-Benchell, J, In press)
- Self Efficacy for Diabetes scale (Stanford Patient Education Research Centre)
- A short evaluation questionnaire (designed by the research team) will allow for participants to provide feedback on their experience of the group. This will help to determine the acceptability of this approach for adolescents with diabetes.

Design

This will be an exploratory pilot study using a quantitative and qualitative approach. The study will seek to compare the outcomes for those who attend the narrative group approach and those who receive treatment as usual. Data will be obtained from the questionnaires and from the Hb1Ac measures both prior to the group starting and at a specified follow up period (3 months for questionnaires and next clinic appointment(s) for HbA1c). Qualitative information on acceptability of the group will be gathered through an evaluation questionnaire immediately following the group and by a short semi structured interview approximately 3 months following the group.

Procedure

Prior to the groups starting, participants will be asked to complete the agreed questionnaires as a baseline measure. In addition, the control group will be asked to complete these baseline measures at approximately the same time as the intervention group.

The 3 groups will be facilitated by Researcher VW and a qualified Clinical Psychologist. In order to keep the ratio of experienced consultants to group participants similar to that of Christie et al. (unpublished), the groups will each consist of 5 adolescent participants and 2 experienced patients.

Initially, participants will be invited to introduce themselves to the other members and the format of the session will be explained.

The group will be facilitated in accordance with **White's (2007)** recommendations on involving outsider witnesses within therapeutic interactions. The group will therefore be divided into three distinct phases:

1. **The telling of the significant story by each person in the group**
2. **The retelling of each story by the people invited to be outsider witnesses**
3. **The retelling of the outsider witnesses' retelling which is done by the adolescent's for whom the group is for.**

The process of retelling will involve four key stages; identifying the expression, describing the image, embodying responses, acknowledging transport.

1. Expression

The individual will be asked to speak about what they heard that they were most drawn to, what caught their attention and captured their imagination.

2. *Focus on the Image*

They will then be asked to describe ant image or mental pictures that came to their mind as they listened to the stories. At this point the outsider witnesses will be encouraged to reflect on how this information influences their views on the person's values, beliefs, hopes, aspirations, dreams and commitments.

3. *Personal Resonance*

The outsider witness will then be encouraged to provide some account of why they were so drawn to certain expressions with a specific focus on their understanding of the way these expressions struck a chord with their own personal history.

4. Transport

The therapist will then invite the outsider witness to speak of the ways in which they have been moved on account of being present to witness these stories. Questions about where the experience has taken them with regard to their own thoughts and their understanding of their own life experiences will be elicited.

The psychologist and the principal researcher will interview the adolescent experienced patients within the group about their experiences of living with diabetes. The other participants will then be asked to reflect on what was said to the whole group. Following this, the psychologist and principal researcher will interview the participants within the group and the experienced patients will be asked to reflect on what was discussed. The group will be structured using the format discussed above, it will be important for the research team to ensure that the language used and the way in which the group is facilitated is appropriate to the age and cognitive level of the group participants.

Immediately following the group, participants will be asked to complete a short evaluation questionnaire on their experience of attending the group. This will help to determine how acceptable the group was deemed to be by this population.

Follow up questionnaires will be completed at 3 month follow up. In addition, their HbA1c levels at their next clinic appointment(s) will be passed on to the principal researcher.

Approximately 3 months after the participants have attended the group, they will be invited to participate in a follow up semi structured interview. This will allow them to provide their views on attending the group. Additional consent will be gained from the adolescents and their parents to participate in these follow up interviews.

Justification of Sample Size

Owing to the unique nature of this pilot study, a calculation of a predetermined sample size was not deemed to be appropriate. However, the study aims to recruit a total of 30 participants who will be randomised to either the narrative therapy group (intervention) or treatment as usual (control).

Following the period of data collection, the principal researcher will conduct post hoc effect size calculations which will help to inform future studies in this area.

Setting and equipment

The group will be carried out in a room at RHSC. It is envisaged that this will take place from 3pm to 5pm to ensure minimal disruption to the school routine.

Data analysis

The present research aims to provide a comparative study of outcomes following a narrative group approach.

As this study will be collecting both within subject and between subject data a Two Way Mixed ANOVA will be used to analyse the data. This method of analysis will be used to consider any changes in diabetes related distress, self efficacy and HbA1c measures of the group participants following the group. Non parametric alternatives can be utilised if the data does not meet the statistical assumptions required for the ANOVA.

Health and safety issues

Researcher safety issues

The group will be conducted in room at RHSC and will be facilitated by the Researcher VW and a qualified Clinical Psychologist. When the group is being run other hospital staff will be nearby and available if required.

Participant safety issues

Written consent will be obtained from all participants (including the experienced patients) and their parents/guardians. They will be informed that they are able to withdraw their consent at any point during the study. All data will be anonymised to ensure confidentiality. Prior to the group starting participants will be informed that anything discussed in the group will remain confidential unless the facilitators feel that there is a risk to themselves or to others. If any psychological concerns arise during the group participants will be offered the opportunity to be referred to the Psychology Service at RHSC. This will also be available to the experienced patients.

The principal researcher will ensure that they have with them glucagon and high glycaemic carbohydrate snacks in the event that a participant was to display signs of being hypoglycaemic.

Ethical issues

Ethical approval will be sought from the West of Scotland Research Ethics Committee and from Greater Glasgow and Clyde Research and Development team. In addition, the project will be sent to Research and Development in Ayrshire and Arran as the principal researcher is an Ayrshire Trainee.

Financial Costs

These are outlined within the "Research Equipment, Consumables and Expenses" form completed alongside this proposal.

Timetable

May 2011	Submit proposal to University
June/July 2011	Proposal assessed
August 2011	Apply for ethical approval
November 2011	Begin recruitment
February/March 2012	Analysis and follow ups
April-June 2012	Write up research
July 2012	Submit research to University
September 2012	Viva

Practical Implications of research

The research will be aimed at those who are struggling most to manage their diabetes. The primary purpose of this study is to assess whether or not a narrative therapy group approach for adolescents is a feasible and acceptable addition to their current treatment. The consequences of poor management of diabetes have been widely documented and therefore there is a value to exploring the role of psychological therapy in improving both the short term and long term outcomes for this population. Overall, this study will add to the evidence base for psychological interventions for adolescents with Type 1 diabetes.

References

Christie, D et al. Using experience consultants as outsider witnesses, Peer Communication.

Dabadghao, P, Vidmar, S. & Cameron, F. (2001). Deteriorating diabetic control through adolescence-do the origins lie in childhood? *Diabetic Medicine*, 18, 889-894

Gage, H, Hampson, S, Skinner, T, Hart, J, Storey, L, Foxcroft, D, Kimber, A, Cradock, S, McEvilly, E. (2004). Educational and psychosocial programmes for adolescents with diabetes: approaches, outcomes and cost effectiveness. *Patient Education and Counselling*, 53, 333-346

Good, BJ, Del Vecchio, MJ. (1994). Medicine, rationality and experience: An anthropological perspective. Cambridge: Cambridge University Press.

Grossman, H.Y, Brink, S, Hauser, S.T. (1987). Self Efficacy in Adolescent girls and boys with insulin dependent diabetes mellitus. *Diabetes Care,* 10(3), 324-329

Hampson, SE, Skinner, TC, Hart, J, Storey, L, Gage, H, Foxcroft, Shaw, K, Walker, J. (2001). Effects of Educational and Psychosocial Interventions for adolescents with diabetes mellitus: a systematic review. *Health Technol Assess*, 5 (10).

Jones, D.B. & Gill, A.M. (2002). Insulin dependent diabetes: an overview. In: PICKUP J, WILLIAMS, G, eds. *Textbook of Diabetes*. Oxford: Blackwell Science.

Kennedy, A, Rogers A & Gately, C. (2005). Assessing the introduction of the Expert Patient Programme into the NHS: A realistic evaluation of recruitment to the national lay led self care initiative. *Primary Health Care Research and Development.* 6, 137-148

Kynags, H, Hentinen, M & Barlow, J. (1998). Adolescent's perceptions of physicians, nurses, parents and friends: help or hindrance in compliance with diabetes self care. *Journal of Advanced Nursing*, 27, 760-769

Malik, J.A and Koot, H.M. (2009). Explaining the adjustment of adolescents with type 1 diabetes: Role of diabetes specific and psychosocial factors. Diabetes Care, 32, 774-779

Morgan, A (2000) *What is Narrative Therapy*, Dulwich Centre Publications

Piana, N, Maldonato, A, Bloise, D, Carboni, L, Careddu, G, Fraticell, E, Mereu, L, Romani, G. (2010). The narrative-autobiographical approach in the group education of adolescents with diabetes: A qualitative research on its effects. *Patient Education and Counselling*, 80, 56-63

Tattersall, R. (2002). The expert patient: a new approach to chronic disease management for the twenty first century. *Clinical Medicine*, 2 (3), 227-229

Van der Ven, N. (2003). Psychosocial Group Interventions in Diabetes Care. *Diabetes Spectrum*, 16 (2), 88-95.

Waller, H., Eisler, C., Heller, S., Knowles, J., & Price, K. (2004). Adolescents and their parent's views on the acceptability and design of a new diabetes education programme: a focus group analysis. *Child: Care, Health and Development*, 31, 2, 283-289

White, M. (2002). Definitional ceremony and outsider-witness responses: Workshop Notes. www.dulwchcentre.com.au

White, M. (2007). Maps of Narrative Practice, London.

Weissberg-Benchell, J and Antisdel-Lomaglio, J (In Press) Diabetes specific emotional distress among adolescents: Feasibility, reliability and validity of the Problem Areas in Diabetes Teen Version. *Paediatric Diabetes.*

Wilson, P, Kendall, S and Brooks, F. (2007). The Expert Patient Programme: a paradox of patient empowerment and medical dominance. *Health and Social Care in the Community*, 15 (5), 426-438