

Can a mental health treatment reduce admissions for diabetic ketoacidosis?

Supplementary material

Nine standardized self-report questionnaires were used to comprehensively capture current psychological functioning at baseline:

1. Experiences in Close Relationships (ECR-R): a 36-item adult attachment assessment tool, assessing two subgroups, attachment avoidance and attachment anxiety. The questionnaire uses a 7-point scale ranging from 1 = strongly disagree to 7 = strongly agree with an average score calculated for each of the subgroups ranging from 1–7 [13].
2. Beck Depression Inventory – version 2 (BDI-II): a standardised assessment tool for depressive symptoms consisting of 21 questions [3].
3. Beck Anxiety Inventory (BAI): a standardised assessment tool for anxiety symptoms consisting of 21 questions [2].
4. Inventory of Interpersonal Problems (IIP-32): a standardised assessment tool for interpersonal functioning consisting of 32 questions including eight subscales [1]. Each item is scored on a 5-point scale (0–4) and each subscale scored individually as a mean score.
5. Difficulties in Emotion Regulation (DERS) scale: standardised 36-item assessment tool with six subscales regarding emotions [7].
6. Problem Areas in Diabetes (PAID) scale - a standardised 20-item questionnaire assessing emotion related to the condition including 4 subscales [14]
7. Eating Disorder Examination Questionnaire (EDE-Q) – a standardised 28-item questionnaire consisting of a global score as well as 4 subscales (shape concern,

eating concern, weight concern, restraint) [9]. Each item is scored on a 7-point scale (0–6) and presented as an average for each subscale and an average global score.

8. Brief Symptom Inventory (BSI) – a standardised questionnaire with a comprehensive overview of mental health symptoms, assessing for presence and intensity, with 9 subscales [4]. Positive symptom total is sum of all positive scores.

9. Standardised Assessment of Personality – Abbreviated Scale (SAPAS) - a standardised 8-item brief screening tool for personality disorder [8]. We favoured a conservative cut-off of 4 in order not to over-estimate the numbers of people with a potential personality disorder.

Mental health of intervention subjects at baseline assessment using questionnaires (n=10)

Mental health parameter (range of possible scores)	Clinical cut offs / population means		Study population (SD) (n=10)
<i>Depression (BDI-ii) (0-63)</i>	Mild	10-16	31.4 (12.2)
	Mod	17-28	
	Severe ^a	29-63	
<i>Anxiety (BAI) (0-63)</i>	Mild	10-16	29.4 (14.4)
	Mod	17-25	
	Severe ^b	26-63	

<i>Brief symptom inventory (positive symptom total score) (1-212)</i>	Community mean ^c (SD) Psychiatric OP	11.45 (+/-9.29) 30.8 (11.63)	36 (13.3)
<i>Emotion regulation (DERS) (36-180)</i>	Community mean ^d (SD) Eating disorder OP population ^e Borderline personality disorder population ^f	78.7 (20.2) 113.0 (27.6) 138.0 (22.9)	115.9 (24.5)
<i>Eating, weight and shape difficulties (EDE-Q) (0-6)</i>	Community mean ^g (SD) Eating disorder OP ^g mean	1.25 (1.10) 4.0 (1.32)	2.4 (1.6)
<i>Interpersonal difficulty (IIP32) (0-4)</i>	Community mean ^h Psychiatric OP mean	0.98 (0.52) 1.51 (0.68)	1.7 (0.46)
<i>Diabetes distress (PAID) (0-100)</i>	Clinical cut off for significant distress ⁱ	>40	58 (19.5)
<i>Attachment (ECR-R subscales, (1-7)</i>	Community means ⁱ :		

<i>Avoidance</i>	Avoidance		3.68 (0.53)
<i>Anxiety</i>	Anxiety	3.0 (1.2)	3.56 (0.78)
		3.5 (1.1)	

Table 1 Mental health of intervention subjects at baseline assessment (n=10)

Abbreviations: BDI-ii, Beck's depression inventory ii; BAI, Beck's Anxiety inventory; DERS, Difficulty in emotion regulation scale; EDE-Q, Eating Disorder Examination Questionnaire; IIP32, Inventory of Interpersonal Problems, PAID, Problem Areas in Diabetes; ECR-R, Experiences in Close Relationships-Revised.

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