Table I. *Demographic characteristics of the sample*

Variable	Low SE-matched group, n = 32 (95% CI)	High SE-matched group, n = 28 (95% CI)	Tests for difference
Baseline self-care (SDSCA total)	25.7 (21.9–29.5)	30.4 (26.7–34.2)	$F = 3.28$, $P = .08$
Baseline SE (PC total)	47.9 (42.5–53.3)	53.1 (48.9–57.2)	$F = 2.33$, $P = .13$
Age (years)	37.3 (33.2–41.4)	42.9 (38.0–47.9)	$F = 2.96$, $P = .09$
Women (%)	63	50	$\chi^2 = 0.95$, $P = .33$
12 years or less of education (%)	11	8	$\chi^2 = 0.23$, $P = .63$
Type 1 diabetes (%)	72	50	$\chi^2 = 3.02$, $P = .08$
Insulin use (%)	78	71	$\chi^2 = 0.36$, $P = .55$
Baseline HbA1c	7.7 (7.1–8.4)	7.2 (6.6–7.8)	$F = 1.38$, $P = .25$

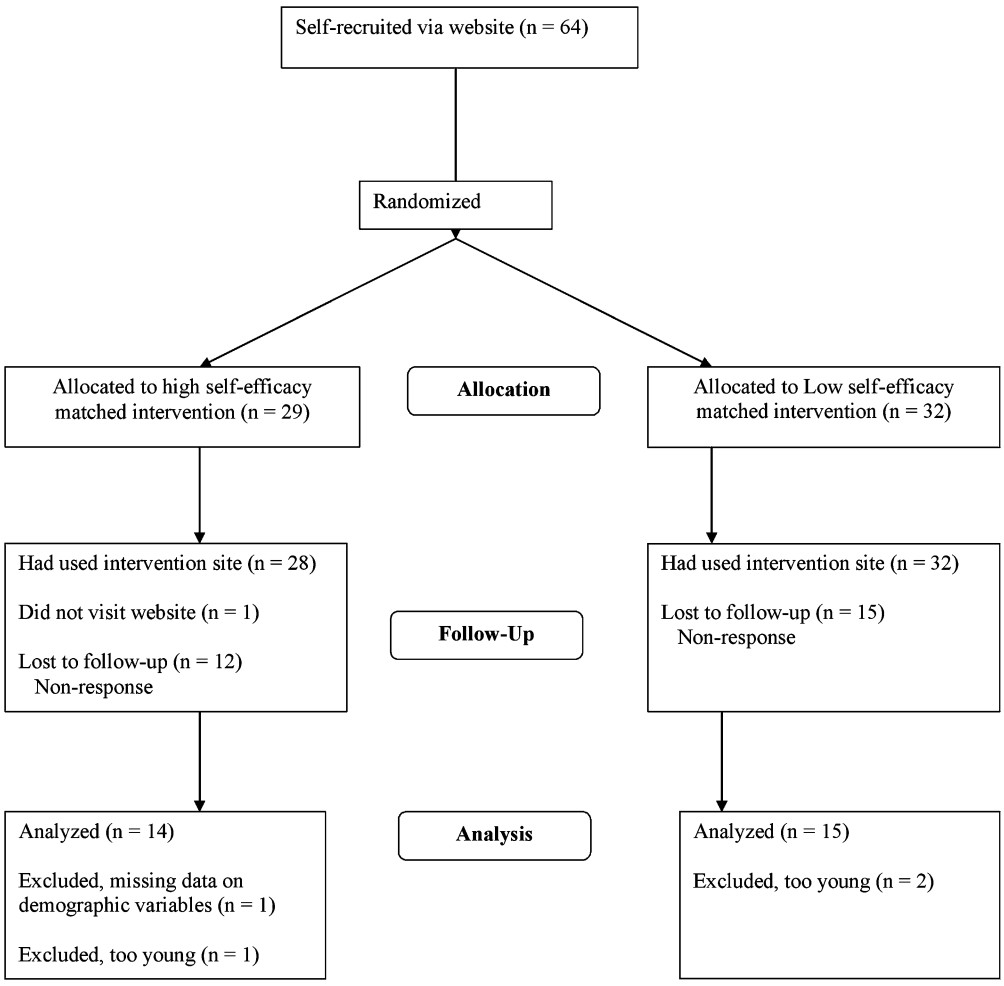

Fig. 1. Participant flow chart.

RMSEA = .028, $P = .61$, GFI = .94) confirming the construct validity of the SDSCA. Concurrent validity was assessed through the association between the SDSCA total latent variable and HbAc1 ($\beta = -.12, P = .33$). Although this relation was not significant, it was in the expected direction, i.e. fewer self-care behaviours were related to worse blood glucose control (higher HbAc1 value).

Main outcome

Mean unadjusted scores for self-care at baseline and at 1 month after intervention can be seen in Table II. There was a significant overall main effect of the intervention on self-care, $F_{(1,25)} = 5.56$, $P = .026$, $\eta_p^2 = .18$. The change in self-care from baseline to 1 month after intervention is shown in Fig. 2. The interaction between time and group was not significant, $F_{(1,25)} = 2.31$, $P = .14$, $\eta_p^2 = .09$, although the HSE group improved more than did the LSE group. A significant interaction between change in self-care and baseline SE was found, $F_{(1,25)} = 4.67$, $P = .040$, $\eta_p^2 = .16$, with lower baseline SE being related to greater improvements in self-care. This relationship can be seen in Fig. 3. A significant interaction between time and gender was observed, $F_{(1,25)} = 4.78$, $P = .038$, $\eta_p^2 = .16$, with men having greater improvements in self-care than women.

A non-significant tendency towards decreases in SE from baseline to post-intervention was observed, $F_{(1,25)} = 2.02$, $P = .17$, $\eta_p^2 = .08$. There were no significant interactions between change in SE and study group, $F_{(1,25)} = 0.70$, $P = .41$, $\eta_p^2 = .03$, nor with baseline level of self-care, $F_{(1,25)} = 0.35$, $P = .56$, $\eta_p^2 = .01$. There was, however, a near-significant interaction between changes in SE and intervention theme, $F_{(1,25)} = 3.81$, $P = .06$, $\eta_p^2 = .13$, with those receiving the diet intervention tending to lower their SE more.

User evaluation

The mean score on perceived usefulness was 3.6 ($CI_{95\%} = 3.1–4.1$), which corresponds to a slightly

Table II. *Mean scores on SE and self-care before and after intervention per theme and per intervention group*

Intervention	Group	Mean SE before (SD)	Mean SE after (SD)	Mean SC before (SD)	Mean SC after (SD)
Blood glucose monitoring	Low SE ($n = 3$)	16.67 (7.51)	20.67 (3.06)	10.67 (4.93)	10.67 (4.93)
	High SE ($n = 9$)	20.22 (4.21)	19.44 (4.69)	10.22 (5.72)	11.56 (4.64)
	Men ($n = 4$)	21.00 (2.83)	21.75 (2.06)	13.50 (0.58)	13.50 (0.58)
	Women ($n = 8$)	18.50 (5.88)	18.75 (4.80)	8.75 (5.97)	10.25 (5.26)
	Total for theme ($n = 12$)	19.33 (5.07)	19.75 (4.25)	10.33 (5.31)	11.33 (4.50)
Diet	Low SE ($n = 8$)	13.75 (3.85)	12.25 (4.43)	8.63 (4.41)	10.88 (4.29)
	High SE ($n = 4$)	19.25 (3.77)	15.00 (2.00)	12.50 (6.76)	15.50 (5.69)
	Men ($n = 5$)	15.20 (4.09)	13.40 (2.97)	10.80 (7.79)	14.80 (4.92)
	Women ($n = 7$)	15.86 (5.15)	13.00 (4.73)	9.29 (3.25)	10.71 (4.79)
	Total for theme ($n = 12$)	15.58 (4.54)	13.17 (3.93)	9.92 (5.33)	12.42 (5.07)
Exercise	Low SE ($n = 4$)	17.50 (10.50)	17.50 (8.54)	7.25 (3.10)	6.75 (4.99)
	High SE ($n = 1$)	24.00	24.00	6.00	8.00
	Men ($n = 2$)	24.00	24.00	7.50 (2.12)	11.00 (4.24)
	Women ($n = 3$)	15.33 (11.72)	15.33 (9.02)	6.67 (3.51)	4.33 (1.53)
	Total for theme ($n = 5$)	18.80 (9.55)	18.80 (7.95)	7.00 (2.74)	7.00 (4.36)
Across all	Low SE ($n = 15$)	52.20 (13.19)	49.73 (14.18)	29.47 (9.49)	30.60 (8.92)
	High SE ($n = 14$)	52.07 (10.66)	49.93 (10.83)	27.64 (8.55)	32.07 (7.50)
	Men ($n = 11$)	52.63 (11.07)	51.45 (9.93)	31.90 (9.52)	37.36 (5.00)
	Women ($n = 18$)	51.83 (12.56)	48.83 (13.95)	26.56 (8.16)	27.61 (7.52)
	Total ($n = 29$)	52.14 (11.82)	49.83 (12.45)	28.59 (8.94)	31.31 (8.15)