The association between self-compassion and diabetes distress: Results from the second Diabetes MILES-Australia (MILES-2) study

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Background

- Diabetes distress involves the worries, concerns and fears arising specifically from living with and managing diabetes.[1]
- Few interventions exist to address the problem of diabetes distress and more research is needed to determine what works best.[2]
- Self-compassion is an emerging area of clinical practice, which may offer a framework for the management of diabetes distress.[3]
- Self-compassion is the practice of being kind, gentle, supportive and understanding toward oneself.[4]
- Higher self-compassion has been associated with better psychological well-being and physical health outcomes in various chronic conditions.[5]
- Few studies have explored the association between self-compassion and diabetes distress.[3]

Aim

- To investigate the relationship between self-compassion and diabetes distress among Australian adults (aged 18-75) with type 1 (T1D) or type 2 (T2D; insulin-using or non-insulin-using) diabetes (T2D-I or T2D-NI respectively).

Method

Study Design

- This study reports on cross-sectional data from adults with T1D, T2D-I or T2D-NI who participated in MILES-2 in 2015. A national online survey hosted by Qualtrics™

Participants

- Adults with T1D or T2D were eligible if aged 18 - 75 years; proficient in English; currently living in Australia.
- Sample size: N = 1,919
  ◊ T1D: 883 (46%)
  ◊ T2D-I: 447 (23%)
  ◊ T2D-NI: 589 (31%)

Measures

- Demographic and clinical characteristics:
  ◊ Age
  ◊ Gender
  ◊ Diabetes duration
  ◊ HbA$_{1c}$
  ◊ Number of complications
  ◊ Employment status
  ◊ Relationship status
- Psychological outcomes:
  ◊ Self-compassion (SCS-SF)
  ◊ Diabetes distress (PAID)
  ◊ Depression symptoms severity (PHQ-8)
  ◊ Anxiety symptom severity (GAD-7)
  ◊ Self-efficacy (CIDS-1 and CIDS-2)

Statistical Analysis

- Participants with 'severe diabetes distress' (PAID ≥ 40) and 'no/mild diabetes distress' (PAID < 40) were compared in terms of self-compassion using ANOVA.
- Hierarchical regression models were analysed for each of the three participant groups (T1D, T2D-I and T2D-NI), with diabetes distress as the dependent variable:
  ◊ Step 1: gender, age employment status, relationship status
  ◊ Step 2: diabetes duration, diabetes complications, HbA$_{1c}$
  ◊ Step 3: depressive symptoms, anxiety symptoms, self-efficacy
  ◊ Step 4: self-compassion

Results

- Demographic, clinical and psychological characteristics of the sample are displayed in Table 1.
- Participants with severe diabetes distress had significantly lower self-compassion scores than those with no/mild diabetes distress. This was true for all sub-groups (Figure 1).
- The results of the hierarchical regression are displayed in Table 2. All models were significant.
  ◊ Self-compassion had a significant, independent negative association with diabetes distress in the T1D and the T2D-I groups, but not in the T2D-NI group.

Table 1. Sample characteristics

Variable	T1D	T2D-I	T2D-NI
Women	520 (59)	176 (39)	267 (45)
Age^	43.6±15.2	61.2±9.0	61.1±9.7
In paid employment	626 (71)	145 (32)	232 (39)
In a relationship	623 (71)	317 (71)	440 (75)
Diabetes duration	18.9±14.3	14.6±7.6	8.4±6.4
Number of complications	0.6±1.1	1.5±1.5	0.8±1.2
HbA$_{1c}$	7.4±1.4	7.5±1.5	6.7±1.7
Moderate - severe depression symptoms (PHQ-8)	213 (24)	160 (36)	129 (22)
Moderate - severe anxiety symptoms (GAD-7)	141 (16)	99 (22)	77 (13)
Self-efficacy (CIDS-1 or CIDS-2)*	82.6±13.9	81.7±14.9	82.4 ±15.1
Self-compassion (SCS-SF)	3.1±0.7	3.2±0.7	3.3±0.6
Severe diabetes distress (PAID)	208 (24)	89 (20)	67 (11)

Data presented as n(%) or M±SD; Frequencies do not always add to total sample size. ^In years.
*CIDS-1 administered to insulin-using participants; CIDS-2 administered to T2D-NI sub-group.

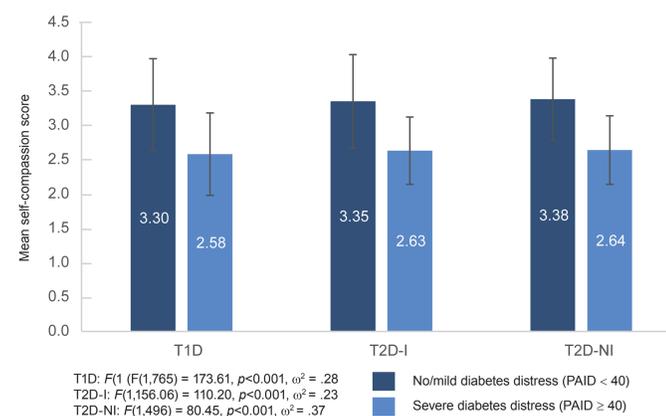**Figure 1. Mean self-compassion score by diabetes distress severity**

T1D: F(1 (F(1,765) = 173.61, p<0.001, ω^2 = .28
T2D-I: F(1,156.06) = 110.20, p<0.001, ω^2 = .23
T2D-NI: F(1,496) = 80.45, p<0.001, ω^2 = .37

Legend: ■ No/mild diabetes distress (PAID < 40) ■ Severe diabetes distress (PAID ≥ 40)

Table 2. Hierarchical regression models for predictors of diabetes distress by diabetes type

Variable	T1D			T2D-I			T2D-NI		
	B (95% CI for B)	SEB	β	B (95% CI for B)	SEB	β	B (95% CI for B)	SEB	β
Gender	-3.01 (-5.14, -.97)	1.06	-.07*	-1.61 (-5.23, 2.01)	1.84	-.04	-2.61 (-5.54, .32)	1.49	-.07
Age	.04 (-.05, .12)	.04	.03	-.17 (-.41, .07)	.12	-.07	-.20 (-.38, -.02)	.09	-.11*
Employed	-.59 (-3.03, 1.86)	1.25	-.01	-3.12 (-7.06, .81)	2.00	-.07	-2.65 (-5.83, .54)	1.62	-.07
Relationship	-3.84 (-6.16, -1.52)	1.18	-.08*	1.43 (-2.34, 5.20)	1.92	.03	-.55 (-3.85, 2.75)	1.68	-.01
Diabetes duration	-.13 (-.21, -.04)	.04	-.08*	.03 (-.21, .27)	.12	.01	-.24 (-.47, -.01)	.12	-.08*
Complications	1.98 (.92, 3.03)	.54	.10**	.86 (-.44, 2.16)	.66	.06	.92 (-.51, 2.35)	.73	.05
HbA$_{1c}$	1.49 (.75, 2.24)	.38	.10**	.36 (-.78, 1.50)	.58	.03	1.31 (.44, 2.18)	.44	.12*
Depression	.91 (.61, 1.2)	.91	.23**	.60 (.06, 1.15)	.27	.17*	.75 (.31, 1.19)	.23	.21*
Anxiety	.87 (.56, 1.19)	.16	.21**	1.15 (.56, 1.74)	.30	.29**	1.34 (.84, 1.84)	.25	.33**
Self-efficacy	-.50 (-.59, -.42)	.04	-.33**	-.36 (-.48, -.23)	.06	-.25**	-.27 (-.38, -.15)	.06	-.22**
Self-compassion	-3.12 (-4.90, -1.35)	.90	-.11*	-5.99 (-8.94, -3.03)	1.50	-.20**	-.34 (-3.16, 2.47)	1.43	-.01
Regression Model	F(11,675) = 110.00, p<0.001 (Adjusted R^2 = .64)			F(11,277) = 33.31, p<0.001 (Adjusted R^2 = .55)			F(11,323) = 36.56, p<0.001 (Adjusted R^2 = .54)		

*p<0.05; **p<0.001

Conclusions

- Participants with severe diabetes distress had significantly lower self-compassion than those with no/mild diabetes distress. This finding corroborates past research.[3]
- Self-compassion had a significant independent negative association with diabetes distress in the insulin-using participants only. More research is needed to explain this association.
- Overall, the results suggest that self-compassion may offer a valid approach to reducing diabetes distress. Research exploring the impact of a self-compassion intervention on diabetes distress is warranted.

References

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