

Title of Abstract

Trends and self-management predictors of glycemic control during pregnancy in women with pre-existing type 1 and type 2 diabetes: A cohort study

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Fourth Year of PhD,
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Abstract

Background: As much of diabetes management during pregnancy occurs at home, self-management factors, including self-efficacy, self-care activities and care satisfaction, may affect glycemia. Our objective was to explore trends in glycemic control during pregnancy in women with type 1 and type 2 diabetes, assess self-efficacy, self-care and care satisfaction and examine these factors as predictors of glycemic control.

Methods: We conducted a cohort study from April 2014, to November 2019, at a tertiary centre in Ontario, Canada. Self-efficacy, self-care, care satisfaction and A1C were measured three times during pregnancy (T1, T2, T3). Linear mixed-effects modelling explored trends in A1C and examined self-efficacy, self-care and care satisfaction as predictors of A1C.

Results: We recruited 111 women, (55 with type 1 diabetes; 56 with type 2 diabetes). Mean A1C significantly decreased by 1.09% (95% CI -1.38, -0.79) from T1 to T2 and by 1.14% (95% CI -1.43, -0.86) from T1 to T3. Self-efficacy significantly predicted glycemic control for women with type 2 diabetes, associated with a mean change in A1C of -0.22% (95% CI -0.42, -0.02) per unit increase in scale. The exercise sub-score of self-care significantly predicted glycemic control for women with type 1 diabetes, associated with a mean change in A1C of -0.11% (95% CI, -0.22, -0.01) per unit increase in scale.

Conclusion: Self-efficacy significantly predicted A1C during pregnancy in a cohort of women with pre-existing diabetes in Ontario, Canada. Future research will continue to explore self-management needs and challenges in women with pre-existing diabetes in pregnancy.