Psychosocial wellbeing among new mothers with diabetes: analysis of the Postnatal Wellbeing in Transition Questionnaire

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Team

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Background

Pre-pregnancy (type 1 or type 2) diabetes currently affects about one in 10 pregnancies in Australia

Australian Institute of Health and Welfare, 2018

Women with type 1 (T1DM) or type 2 (T2DM) diabetes and their infants are at greater risk of adverse perinatal outcomes than women without diabetes

Balsells et al., 2009; Wahabi et al., 2012

They can also face complex psychosocial challenges during the transition motherhood:

- Major life transition
- Concern about health of infant
- Breastfeeding
- Diabetes management and glycaemic control – impact on caring for infant

Rasmussen et al., 2007; Berg & Sparud-Lundin, 2012; Rasmussen et al., 2013a

- "Balancing act"

Poirier-Solomon, 2002

Background

Postnatal Wellbeing in Transition (PostTrans) scale

Rasmussen et al., 2013b

- assesses psychosocial needs of women with pre-pregnancy diabetes in the postnatal period;
- assessed for face and content validity among women with T1DM;
- Subsequent item validation among women with T2DM.

But: 51 items!

Rasmussen *et al. BMC Pregnancy and Childbirth* 2013, **13**:54
http://www.biomedcentral.com/1471-2393/13/54

BMC Pregnancy & Childbirth

RESEARCH ARTICLE Open Access

Transition to motherhood in type 1 diabetes: design of the pregnancy and postnatal well-being in transition questionnaires

Bodil Rasmussen[1*], Trisha Dunning[2], Christel Hendrieckx[3,4], Mari Botti[1,6] and Jane Speight[2,3,4,5]

Conceptual framework:

1. psychological wellbeing;
2. social environment (including support from health professionals as well as family and friends);
3. physical (maternal and infant) wellbeing.

Aim

Exploratory analysis of the PostTrans scale to investigate whether:

- A reduction in items was statistically supported; and
- Any clinically meaningful subscales emerged.

Part of a broader study to investigate factors associated with breastfeeding among women with T1DM or T2DM.

Ethics approval: Western Health, Royal Womens and Melbourne Hospitals and Mercy Hospital HRECs.

Methods

A prospective cohort of pregnant women with a diagnosis of T1DM or T2DM was recruited from three metropolitan maternity hospitals in Melbourne.

Recruited at scheduled visits to obstetric / diabetes clinics.

Inclusion criteria:

- T1DM or T2DM (medical records);
- able to provide written informed consent in English.

Exclusion criteria:

- pregnancy known to be affected by a fetal abnormality;
- significant medical co-morbidity in addition to diabetes;
- taking medication where breastfeeding was contra-indicated.

Methods

Data collection:

- Pregnancy (30 to 34 weeks' gestation)

Demographic, health & reproductive characteristics

- Postnatal:
  1. After birth
  2. 6 – 8 weeks postpartum
  3. 6 months postpartum

Birth and hospital experience;

Breastfeeding;

PostTrans Scale

Survey over the phone

Hard / soft copy provided if necessary

Methods

Analysis:

- Data pooled from three postpartum surveys;
- Data assessed for suitability for exploratory factor analysis
    - Kaiser-Meyer-Olkin (KMO) value ≥0.6
    - Bartlett's Test of Sphericity reached statistical significance ($p < 0.05$);
- Principal Components Analysis – iterative, until all items loaded ≥ 0.5 on at least one factor
- Internal consistency for each factor: Cronbach's α

Results

79/132 (60%) consented and completed pregnancy survey

Mean (SD) gestation= 31.5 (5.4) weeks

Mean (SD) weeks/months postpartum	n
4.4 (3.3) weeks	39
13.4 (4.3) weeks	48
7.4 (1.3) months	32

117 complete PostTrans responses

Results

Sample characteristics, n=39 (data collected in pregnancy)

	n (%)	Mean (SD, Range)
Participant's age		33.1 (4.5, 24 - 43)
Partner's age		35.6 (5.5, 25- 48)
Born in Australia	26 (67%)	
Tertiary education	31 (80%)	
Married / Living with partner	33 (85%)	
First child (primiparous)	16 (41%)	
Diabetes type		
type 1	25 (64%)	
type 2	13 (33%)	
Missing	1 (3%)	

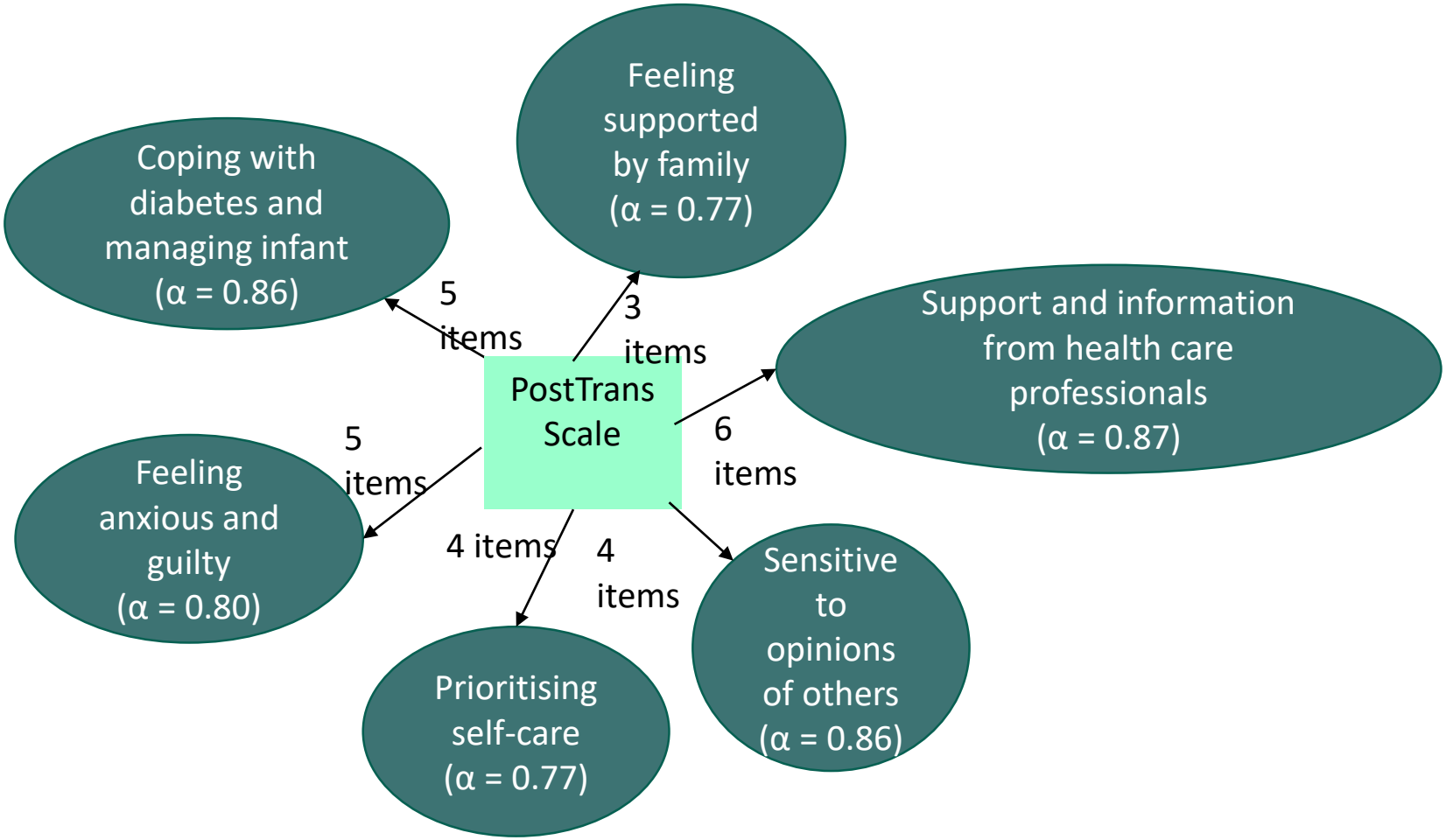
Results

Aside from small sample, data were suitable for factor analysis.

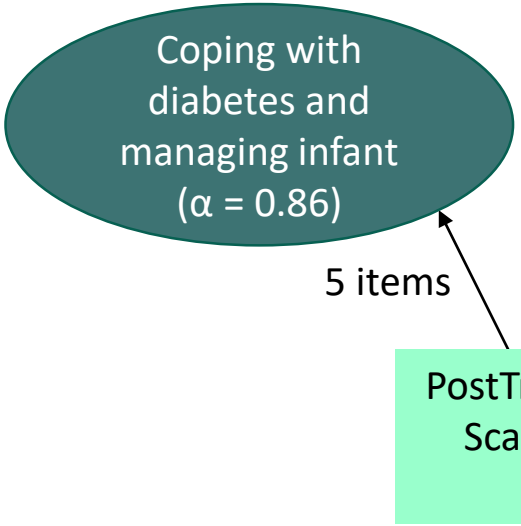
Exploratory factor analysis:

- The PostTrans scale was reduced to 27 items.
- Six factors emerged, which explained 68.7% of the variance
- Factors are clinically meaningful

Results

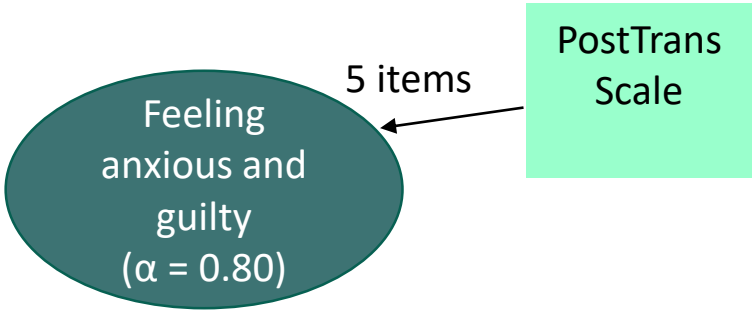


Results



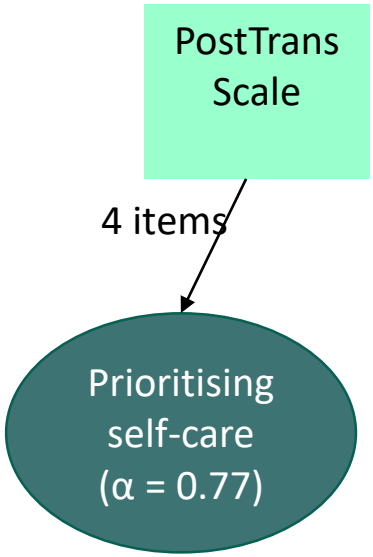
I am coping well with looking after both my baby and diabetes
I can maintain blood glucose levels to my satisfaction whilst nursing my baby
Balancing the needs of my diabetes care and my baby's needs is a real challenge (reverse scored)
I feel anxious about my diabetes management since becoming a mother (reverse scored)
I feel I can manage whatever is involved in being a mother and having diabetes

Results



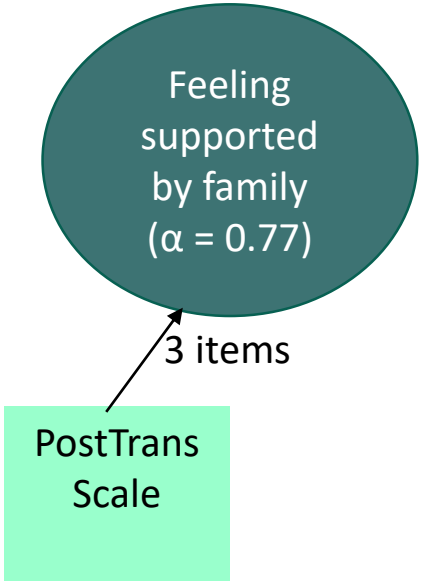
I worry about dropping my baby when I have a hypo (reverse scored)
I feel guilty knowing that diabetes might affect my baby's health (reverse scored)
I worry about my baby developing diabetes (reverse scored)
I worry more about low blood glucose levels now that I have to take care of a baby (reverse scored)
I feel guilty about the effect my diabetes has on family and friends now I have a baby (reverse scored)

Results



Being a mother has made me more aware about looking after my diabetes
Having a baby makes me realise my own health is very important
Having a baby motivates me to look after my diabetes more carefully
I find it easier to prioritise my long term health goals now I am a mother

Results



I feel emotionally supported by my family (e.g. parents, in-laws, brothers, sisters)
I feel supported by my family (e.g. parents, in-laws, brothers, sisters) with the practicalities of caring for my baby
I feel supported by my partner with the practicalities of caring for our baby

Results

PostTrans Scale

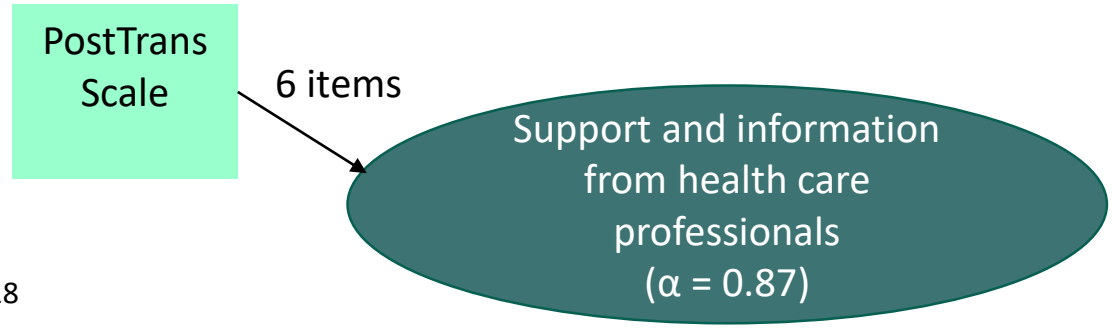
4 items

Sensitive to opinions of others (α = 0.86)

My friends think they know what is best for my baby (reverse scored)
My friends think they know what is best for my diabetes (reverse scored)
My family think they know what is best for my baby (reverse scored)
My family claims they know what is best for my diabetes (reverse scored)

Results

My health professionals explained how breastfeeding could affect my blood glucose levels
My health professionals explained how to manage my blood glucose levels when breast feeding
I received adequate information about how breastfeeding impacts on blood glucose levels
My health professionals equipped me with the skills needed to manage my diabetes after giving birth
I have enough information about caring for a baby whilst having diabetes
I feel supported by my health professionals

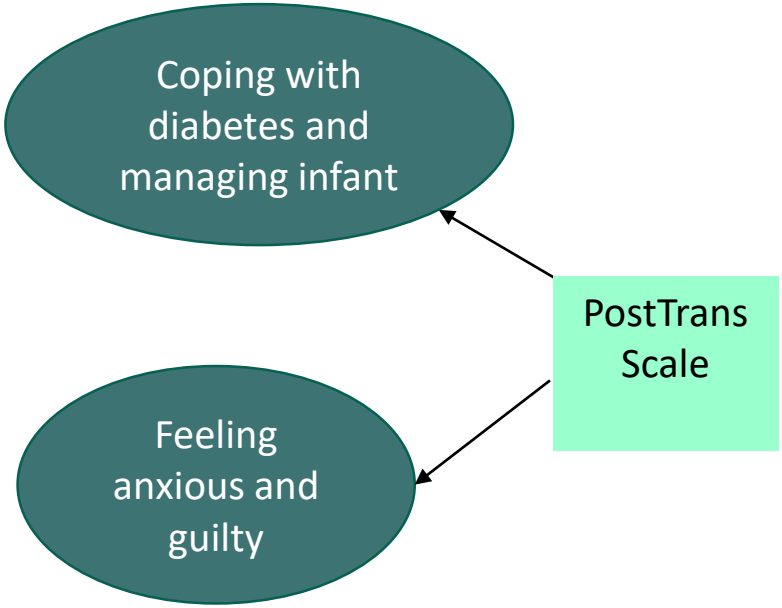


Discussion

The revised, shorter scale is more feasible for use in clinical and research settings.

The subscales reflect important areas of concern for women, consistent with existing research among women with T1DM or T2DM as they transition to motherhood.

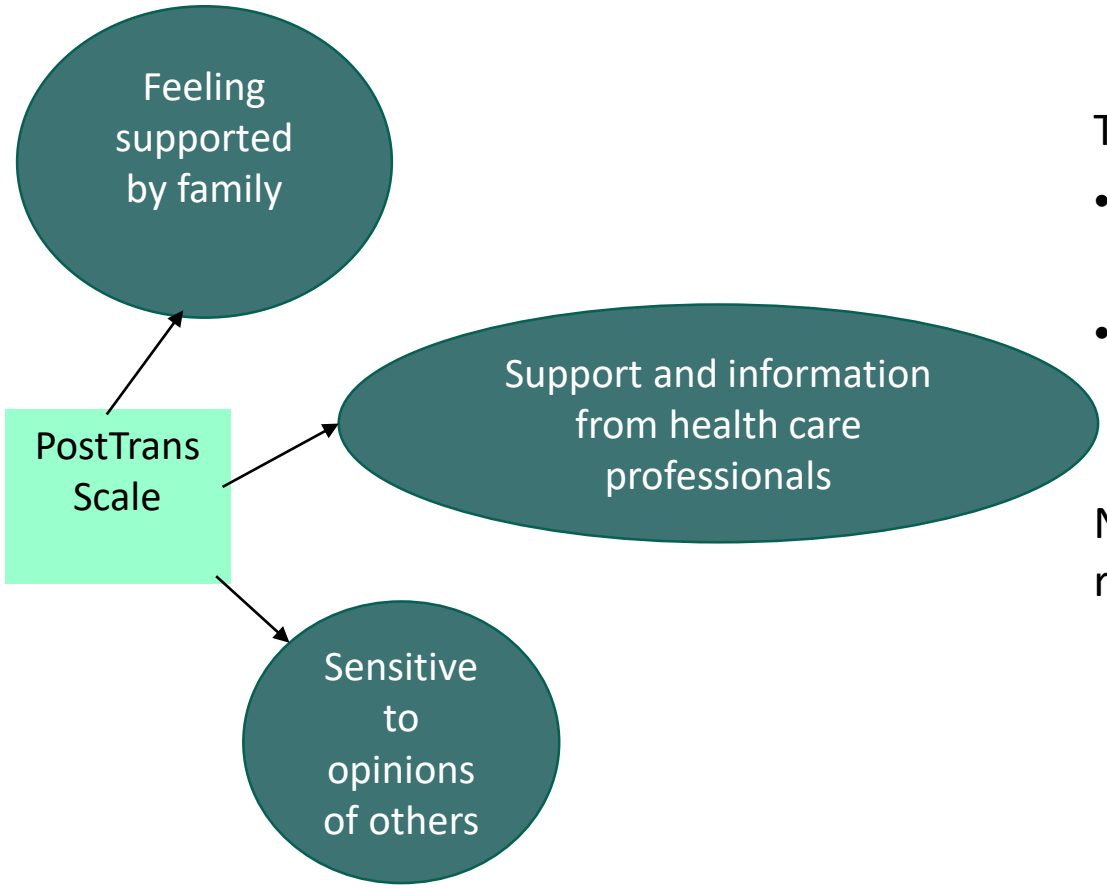
Discussion



Vulnerability to symptoms of depression and anxiety, and feelings of guilt, anger, fear

Dalfrà et al., 2012; Fisher et al., 2014; Rasmussen et al., 2013a, Ross et al., 2016

Discussion



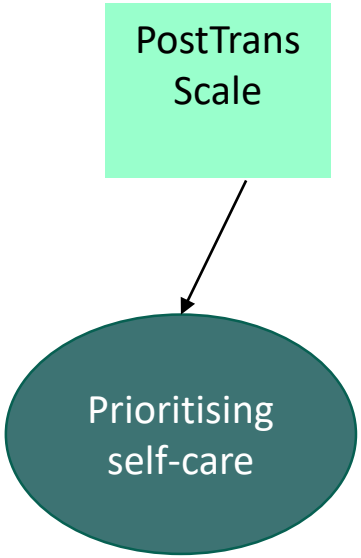
The importance of:

- (constructive) support from family and friends;
- adequate support from health professionals – quantity and quality

Negotiated support and responsibilities.

Berg & Sparud-Lundin, 2009; Lavender et al., 2010; Sparud-Lundin & Berg, 2011; Stenhouse & Letherby, 2011

Discussion



Difficulties establishing self-care, including routines

Sparud-Lundin & Berg, 2011; Berg et al., 2012; Rasmussen et al., 2013a

Discussion

Limitations:

- The sample size was small; confirmatory factor analysis with a large sample is needed;
- Not representative (highly educated).

Strengths and implications:

Once validated in a larger sample, the revised PostTrans questionnaire has the potential to be useful:

- Research: could be used for planning and evaluating interventions and programs to enhance the psychosocial wellbeing;
- Clinical: could assist health professionals to identify the psychosocial support needs of women.

Acknowledgments

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Images: https://www.pexels.com; https://pixabay.com/

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