Exploring the nutrition knowledge, attitudes and practices of pregnant women in Australia

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ABSTRACT

Maternal nutrition from preconception through to lactation can influence the growth, development and long-term health of children. Understanding the modifiable individual factors influencing dietary choices and compliance with nutrition recommendations is key to increasing compliance with recommendations. A self-administered web-based questionnaire was developed to assess women's knowledge, attitudes and practices regarding nutrition during pregnancy. Using the theory of planned behaviour (TPB) as a framework, this study aimed to increase understanding of the psychosocial factors influencing women's dietary quality and intention to consume a healthy balanced diet during pregnancy. Discrete choice experiment (DCE) methodology was also used to examine pregnant women's preferences for dietary supplements. A total of 857 pregnant Australian women completed the survey between June and November 2013. This included a national sample of 455 women recruited using an online panel provider and a South Australian sample of 402 women recruited through the antenatal clinic of a large public maternity hospital in Adelaide. Analysis revealed poor knowledge of and poor compliance with the dietary and supplement recommendations in pregnancy. Pregnant women were also found to be poor judges of dietary adequacy, with over half of the sample perceiving their diets to be healthy despite the majority not complying with recommendations. Stronger subjective norm and greater perceived behavioural control emerged as the strongest predictors of healthy eating intention in pregnancy, with positive attitude being less important. While successfully predicting healthy eating intention, the TPB model was found to be a relatively poor predictor of dietary quality in pregnancy. Findings from the DCE revealed four distinct consumer segments with unique preferences for dietary supplements. Nutrient levels and endorsement were the most important factors influencing choice in the largest segment (44% of sample), with the

strongest preferences found for products with higher levels of folate and iodine and those endorsed by the Commonwealth Scientific and Industrial Research Organisation (CSIRO) and the Dietitian's Association of Australia. Overall, the study findings indicate a need to increase knowledge regarding the importance, dose and timing of folic acid and iodine supplementation, and to improve women's ability to evaluate the healthiness of their dietary intake. Main healthcare providers may be best positioned to provide this nutrition education, based on the finding that they were the most influential and preferred sources of pregnancy-related nutrition information. Further, intervention strategies aiming to increase healthy eating intentions in pregnancy should focus on increasing women's self-efficacy and perceptions of control over healthy eating in pregnancy, and should also target influential social sources (main healthcare providers, female family members, pregnant or previously pregnant friends, and partners). It is particularly important that these key influencers have the necessary resources to support and encourage pregnant women to eat a healthy diet during pregnancy. Lastly, the findings regarding the different product attributes influencing choice of dietary supplements among different consumer segments revealed that there is no one-size-fits-all strategy for guiding pregnant women towards making appropriate supplement choices. Thus, information and recommendations regarding supplementation and the sources of this information need to be targeted to the different consumer segments in order to more effectively influence the wider population of pregnant women.

DECLARATION

I certify that this work contains no material which has been accepted for the award of any other degree or diploma in any tertiary institution. This work, to the best of my knowledge, contains no material previously published or written by another person, except where due reference has been made within the text of this book. In addition, I certify that no part of this work will, in the future, be used in a submission for any other degree of diploma in any university or other tertiary institution without the prior approval of the University of Adelaide.

Section 2.1 of this thesis is part of a review paper in a peer-reviewed publication, with me as first author and main contributor to the paper, written with and under the guidance of my supervisors Prof Maria Makrides, Dr Shao Jia Zhou and Assoc Prof Wendy Umberger.

I consent to this copy of my thesis being deposited in the University of Adelaide Library to be available for loans and photocopying (subject to the provisions of the Copyright Act 1968). I acknowledge that copyright of published works contained within this thesis resides with the copyright holder(s) of those works. I also give permission for the digital version of this work to be made available on the web, via the Australasian Digital Theses Program (ADTP) and also through web search engines.

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LIST OF ABBREVIATIONS

CA	Conjoint analysis
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DAA	Dietitians Association of Australia
DCE	Discrete choice experiment
FFQ	Food frequency questionnaire
GP	General practitioner
HCP	Healthcare provider
NHMRC	National Health and Medical Research Council
NTD	Neural tube defect
PBC	Perceived behavioral control
RUT	Random utility theory
SA	South Australia
TPB	Theory of planned behaviour
WCH	Women's and Children's Hospital
WTP	Willingness to pay