

## Use of a web-based dietary assessment tool in early pregnancy

It is now known that diet during pregnancy can influence long-term health of the offspring. However accurate dietary intakes are difficult to obtain. For example, mis-reporting of energy intakes by the respondent and inaccurate estimation of portion sizes and/or incorrect collection of dietary data by the interviewer can result in significant error.

Several methods for dietary assessment are currently used in clinical and research practice, with new models and technologies also beginning to emerge. However, there is currently a lack of research describing the use of online tools in the dietary assessment of pregnant women.

Because of this, the authors compared dietary quality scores derived from a newly developed online Dietary Assessment Tool (DAT) against nutrient intakes derived from the Willett Food Frequency Questionnaire (WFFQ) which has been previously validated in pregnant women presenting for antenatal care.

The study found that dietary quality scores derived from this novel, web-based DAT matched well with nutrient intakes derived from the WFFQ in a pregnant population. For example, higher diet and nutrition (DaN) scores were associated with higher intakes of nutrients known to be important in pregnancy, such as iron and folate. In addition, higher DaN scores were also associated with reduced intakes of nutrients linked with adverse health outcomes, for example saturated fat.

This study is important as it is one of the first to investigate the use of an online tool for dietary assessment in pregnancy. Technology increasingly influences the way in which we collect and communicate information thus the advantages of the web-based DAT are manifold. The web-based DAT collects information on dietary patterns and overall dietary quality, and assigns respondents a diet and nutrition score which is simple to interpret and understand. The dietary quality scores generated by the DAT provide a sound overall representation of nutrient intakes important to maternal and fetal health outcomes. Its technological advantages such as the use of images to quantify portion sizes may also help to reduce the number of women who inaccurately report their dietary intake. In addition, the web-based DAT is quick, easy, scalable and inexpensive to administer. Thus web-based dietary questionnaires have the potential to enhance dietary assessment by offering a more cost- and time-effective, less laborious method of data collection.

In light of our findings, future research should focus on the acceptability of the DAT as method of dietary intake analysis among obstetric populations. The ability of this online tool to collect additional information regarding users' medical history, socio-demographic details, physical activity levels and other lifestyle behaviours such as smoking, commends it for use as a research tool in the public health context.

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