

Exploring Nutrition Literacy in Relation to Nulliparous Pregnant Women's Internet Use

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What is this about?

- Adequate nutrition in pregnancy has a vital role in maximising the health of the mother and infant.¹⁻³ Pregnant women can have increased awareness regarding the concepts of healthy eating, and have been known to actively seek nutrition-related information.^{2,4,5}
- The Internet is a popular source of health information^{4,6,7} and allows women of all educational levels to acquire knowledge. However, information can be poorly referenced, inconsistent and written by self-stated 'experts' who may have no formal qualifications.
- Nutrition literacy can be defined as the degree to which individuals have the capacity to obtain, process and understand basic nutrition information.^{8,9} This forms the basis of decision making and can influence eating behaviours. This can have major implications regarding the types of information sourced and how it contributes to existing knowledge.
- Information seeking practices can be entwined with the way that pregnancy information is presented. This incorporates communication approaches, including narrative (story telling) and paradigmatic (didactic and statistical evidence).¹⁰

Aim:

- To explore nutrition literacy in relation to nulliparous pregnant women's Internet use.

How did we do it?

- Qualitative study using semi-structured interviews.
- Guided by descriptive phenomenological analysis and borrows from grounded theory.
- Inclusion criteria:
 - Nulliparous pregnant women at any stage of pregnancy
 - Aged 18 years or older
 - Accessed the Internet at least once during pregnancy to search for nutrition information
 - Could read and comprehend English
- Data immersion occurred concurrently to data collection and NVivo 10 was used to assist thematic analysis. Inductive and deductive analysis were used with each research question.
- Triangulation, member checking, cross checking, constant comparison were used as qualitative reliability and validity measures.



What does the data say?

- Fifteen women in either their second or third trimester were recruited from geographically diverse locations in south Queensland.
- Six broad themes emerged repeatedly from interview data:
 1. **Motivation:** The main motivator was concern for foetal development.
 2. **Access and navigation:** Information was accessed from a variety of hospital, government, baby specific and social networking web sites. Web applications for smartphones were popular and often used in conjunction with web sites.
 3. **Appraisal:** Most women sought evidence of "trustworthiness". Women had greater faith in Australian sites and those generated by familiar baby-related brands due to cultural relevance and perceived accountability respectively.
 4. **Searching frequency:** Searching was primarily in the first trimester.
 5. **Preferred features:** Web sites and applications that were easy to navigate and presented information clearly were consistently favoured.
 6. **Engagement with communication approaches:** Narrative communication was often perceived with scepticism, and paradigmatic communication was sought and used as a guide. Each form of communication met different needs and a combination of these were the most utilised.

Characteristics	No.
<i>Age bracket (yr)</i>	
20-24	3
25-29	7
30-34	4
35-39	1
<i>Highest level of education completed</i>	
Secondary/High School	1
Community college/College of further education	6
Bachelor degree or higher	8
<i>Level of remoteness*</i>	
RA1 Major Cities	7
RA2 Inner Regional	2
RA3 Outer Regional	6

*The Australian Standard Geographic Classification used to classify Australia into major regions.

What does it mean?

- Most online searching happens during the first trimester which may reflect women's desire for information early in pregnancy which is often before they engage with the health care system.
- Australian web sites elicited a familiarity that participants perceived to be dependable. Thus reputable Australian online resources may represent a positive foundation for health practitioners to build upon and recommend to clients.
- Variation in preferred features emphasises the challenge in appealing to a diverse population. Interactive features and personalisation options could be incorporated into paradigmatic sites such as government sites to attract a wider audience.
- Preference for sites which use both narrative and paradigmatic forms of communication may be due to meeting different informational needs and decreasing the need to search elsewhere.

Study limitations

- The participant sample had higher than average educational levels and the sample size was relatively small, thus some aspects of online practices may not have been revealed. Women in their first trimester could not be captured and thus memory recall was heavily relied upon.

Conclusions

- Online resources are increasingly being used as complementary avenues to that provided in person by health practitioners.
- Nulliparous pregnant women's degree of online nutrition literacy is varied and complex. Approaches to appraising nutrition information were varied, and the opportunity for misinformation is considerable.
- Health practitioners have a responsibility to be more active in helping to ensure women are viewing current and accurate information.
- Future research should seek to ascertain the accuracy of viewed sites and build upon approaches to support women sourcing information online.



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