EXPLANATORY MODELS OF HEALTH DURING PREGNANCY: NATIVE WOMEN AND NON-NATIVE HEALTH CARE PROVIDERS IN TORONTO

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INTRODUCTION

Pregnant Native women living in reserve communities are considered by the medical profession to be a high risk population (Black 1982; Munroe et al. 1984; Wotton and Macdonald 1982). Little information exists, however, on the health of pregnant urban Native women and the outcomes of their pregnancies. The small amount of information available suggests that these women appear to avoid seeking health care until their pregnancy is well advanced. Factors cited for this delay are that Native women perceive pregnancy as a natural event for which there is no need to seek medical advice and treatment, and that they may lack understanding of risk factors involved in pregnancy (Bruyere 1981; Keetley 1981; Mears et al. 1981). These perceptions are in contrast to those of many health care professionals who consider pregnancy a crucial time for preventive intervention. Therefore health care providers and their urban Native clients may have differing explanatory models of health during pregnancy. These differences will be reflected in discrepant expectations and miscommunication which may result in avoidance of perinatal health care.

The work presented here is a description of a project to assess the perceptions and explanatory models of health during pregnancy held by Native women in Toronto. These data are part of a larger study which contrasted the perceptions and explanatory

models of health during pregnancy of Native women and non-Native health care providers.[1]

THEORETICAL FRAMEWORK

The model developed for this work was adapted from Kleinman's (1978) explanatory models of illness and disease. Kleinman suggests that whereas health care practitioners talk about non-health episodes in terms of biological functions and disease, the client talks about non-health episodes in terms of illness, seeking not only symptom relief but also personally and socially meaningful explanations and psychosocial treatments.

It is important to note, however, that there has been little research conducted on explanatory model differences of health during pregnancy between client and practitioner. We surmised that this lack may be due to the controversy that exists in the literature as to whether pregnancy is a state of illness (Hern 1977) or a state different from an ordinary health state but not a form of illness (McKinlay 1972). Nonetheless, there is strong indication that an understanding of explanatory models of health during pregnancy can have direct importance for health care providers (Nichter and Nichter 1983).

To guide the development of the data collection instrument and data analysis we developed the theoretical framework outlined in Figure 1.

One side of the framework represents the explanatory models of health practitioners while the other side that of the client. Theme areas of perceived need for health care, perception of risk, preventive and promotive strategies and perception of pregnancy outcome were obtained through content analysis of the prenatal materials listed in Figure 2.

FIGURE 1

PRACTITIONER/CLIENT EXPLANATORY MODELS

OF HEALTH DURING PREGNANCY

EXPLANATORY MODEL

ONSET OF PREGNANCY

PRACTITIONER		CLIENT
perceived need for health care	----------	perceived need for health care
perception of risk	----------	perception of risk
preventive and promotive health strategies	----------	preventive and promotive health strategies
perception of pregnancy outcome	----------	perception of pregnancy outcome

HEALTH OUTCOME OF PREGNANCY

FIGURE 2

TITLES OF PRENATAL MATERIAL ANALYZED

- Can I Take This If I'm Pregnant? Addiction Research Foundation, 1985.
- Diseases from Pets. Etobicoke Health Department 1983 (Distributed by the Prenatal and Parenthood Education Services of Metro Toronto).
- Expectant Parent's Information Kit. Proctor and Gamble Professional Services 1983.
- Fitness and Pregnancy. Fitness and Amateur Sport Canada, Ottawa 1985.
- Healthy Beginnings. Ontario Ministry of Health 1985.
- Pregnancy. City of Toronto Health Department (undated).
- Safe Passage. The Easter Seal Society of Ontario (undated).
- Should You Smoke During Pregnancy? Canadian Council on Smoking and Health, 1985.

These materials are readily available in clinics, doctor's offices and drug stores. Additional content analysis of these materials was done to identify factors within these themes. These factors were considered to be the standard message of health care during pregnancy. For example, smoking, alcohol consumption, and substance abuse during pregnancy were considered to be factors under the risk theme. The framework themes were seen to interrelate as follows:

- perceived need for health care during pregnancy would influence health seeking behaviours.
- perceived risk during pregnancy would influence both health care seeking behaviour and preventive and promotive health strategies.
- perception of appropriate preventive and promotive health strategies would influence actions taken during pregnancy.
- perceived outcome of pregnancy would influence perceived need for health care, perception of risk and promotive and preventive behaviours.

These themes were put to further analysis based on data available from the literature concerning differences that could occur between the perceptions of the urban Native women and the standard message on health care during pregnancy. This analysis resulted in the issues cited below and were used in the development of the multi-method survey instrument.

A. Perceived Need for Health Care During Pregnancy

This will influence health seeking behaviour in a variety of ways. The client's perceived need for health care may be related to factors such as a belief that pregnancy is a natural process in which the body will "take care of itself" or that influence-control over the process and outcome of pregnancy is external to the women's own preventive and promotive actions (Farkas 1983, 1984). In contrast, the health care provider's perceived need for health care during pregnancy may be related to beliefs that pregnancy is a time for crucial intervention because the woman

and child are subject to physiological and external factors which could result in a variety of complications, and that preventive and promotive strategies will influence the outcome of pregnancy (Farkas 1983, 1984).

B. Perceived Risk During Pregnancy

This will influence both health care seeking behaviour and preventive and promotive health strategies. The client may not be aware of prenatal risks defined by health professionals, or the client may not share the practitioner's concerns about the effect of practices such as control of smoking or of weight gain during pregnancy.

C. Perception of Appropriate Preventive and Promotive Health Strategies

This will influence actions taken during the pregnancy. The practitioner's perception of appropriate preventive and promotive strategies will be a reflection of current scientific knowledge (Johnston et al. 1985), whereas the client's perception of promotive and preventive strategies may differ from those of the practitioner and be influenced by experience, advice from friends or family, and perhaps other sources such as Native herbalists.

D. Perceived Outcome of Pregnancy

This will influence perceived need for health care, perception of risks and promotive and preventive behaviours. Implied in the practitioner's message regarding these strategies is that a positive outcome will result if the client follows the strategies, therefore implying some (internal) control over the outcome; for example control of weight so as not to risk perinatal death. In contrast, the client may feel that the outcome of the pregnancy has little to do with the suggested strategies and/or that she has little control over the outcome.

While it is acknowledged that miscommunication between members of different ethnic groups also occurs because of differences in communication patterns (Scollon and Scollon 1981),

and that these differences may affect communication between a Native woman and a non-Native health care provider (Farkas 1984), these factors are beyond the present scope of the model. Likewise of importance but beyond the scope of the model are factors such as poverty and social class in health seeking behaviour and outcome of pregnancy (Boone 1985; Bruyere 1981).

METHODOLOGY

Constraints have been cited in the literature regarding the utilization of standard survey methods among Native peoples (Black 1973; Farkas 1984; Scollon and Scollon 1979, 1981). Therefore we devised a multi-method instrument which we felt to be less intrusive. The instrument was composed of three sections:

1. four projective pictures and verbal probes.
2. orally administered sentence completion,.
3. orally administered five-point Likert scale belief and attitude questionnaire.

Projective pictures allow respondents to reveal information about themselves that might not be obtained by direct questioning (Lindzey 1961). This technique has been employed by several researchers working with Native respondents in Canada (Farkas 1984; Granzberg 1979; MacQuarrie 1984). A Native female artist designed the posters used in this section. Sentence completion, a verbal analogue to visual projective techniques, allows the respondent to reveal information that may not be obtained by direct questioning (Granzberg 1979). Belief and attitude questionnaires provide a less probing way of obtaining information than direct questioning (MacQuarrie 1984).

The content of verbal probes and questions used in the instrument were devised from the following sources:

1. factors obtained from content analysis of prenatal materials: these factors were considered to be the standard health care message.
2. factors identified by the Native research team, including the effect of worry, bad thoughts and laziness on pregnancy outcomes.

3. factors identified from the literature review.

These factors were repeated in the questions and probes to provide internal validity and a comparison of the different methods used to elicit answers.

Thus the women were questioned by means of three different methods about perceived need for health care, perception of risk, preventive and promotive health strategies and perception of outcome of pregnancy. A Native member of the research team conducted the interviews with the English-speaking Native respondents, and the interviews were taped. Non-Native health care providers were questioned by use of sentence completion and the belief and attitude questionnaire; a non-Native member of the research team conducted the untaped interviews. All responses were transcribed and the content analyzed. An example of the methodology is shown in Figures 3 and 4.

SAMPLING METHODOLOGY

The intention at the start of the study was to draw a random sample of pregnant women. This endeavour proved to be impossible as the Toronto Native population is highly transient and it is difficult to trace individuals. Therefore a multi-method technique was used which combined snowball sampling, advertising in the Native Women's Resource Centre newsletter and use of the "moccasin telegraph" (word-of-mouth) in Toronto. The identification of women for the sample was a slow but steady process.

The majority of the sample of thirty women were interviewed at the Gabriel Dumont Housing complex, a facility which provides subsidized housing for Native people. Interviewing was also done at the Native Women's Resource Centre. Data from the interview of one woman were excluded from analysis because her Native ancestry was questioned by the research team.

The mean age of the 29 women in the study was 25.5 years (range 18 to 35 years). All had experienced a pregnancy in Toronto within two years preceding the interview; the mean number of pregnancies was 2.5 (range 1 to 6).

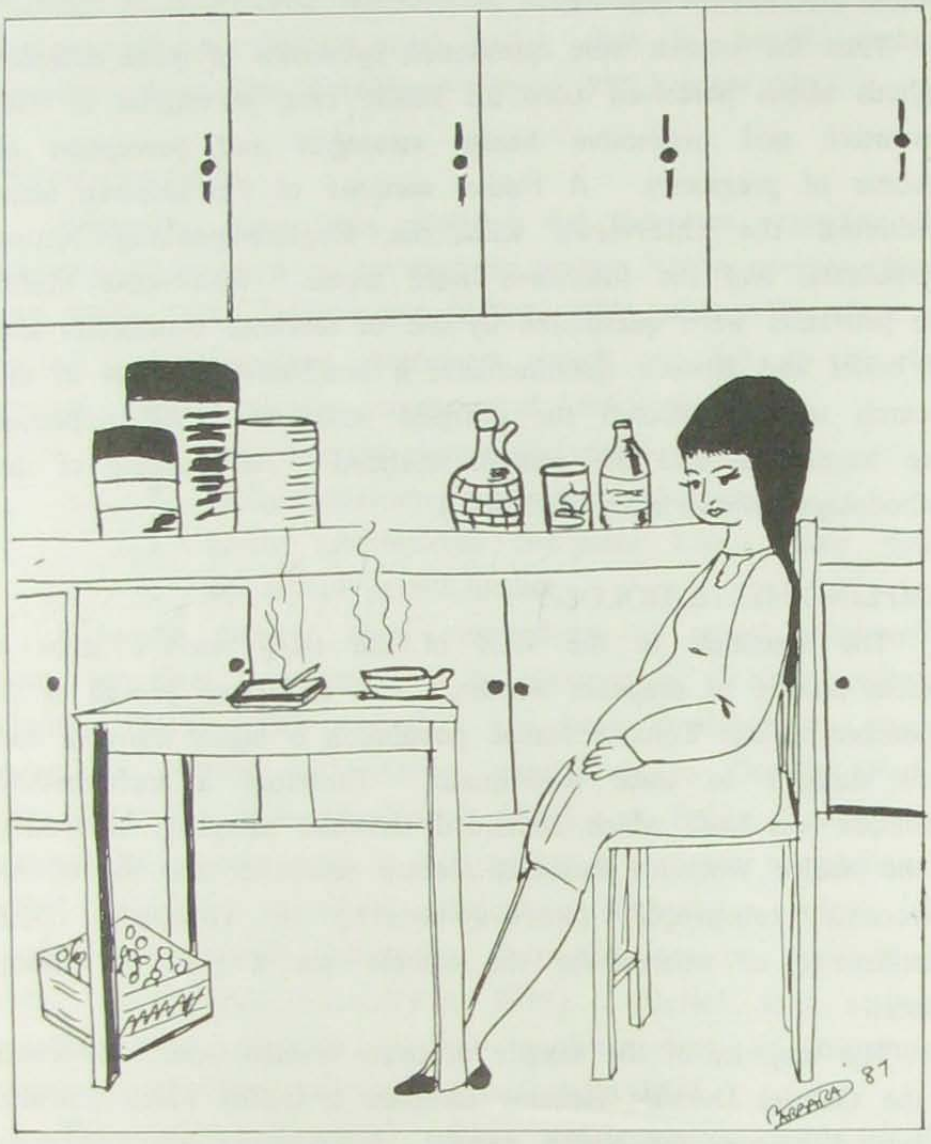

FIGURE 3 Picture used for the verbal probe, "Someone told the woman that if she smokes it will harm the baby. I wonder what she thinks about this?"

FIGURE 4

SENTENCE COMPLETION AND BELIEF AND ATTITUDE QUESTIONS ON THE THEME OF PERCEPTION OF RISK

SENTENCE COMPLETION:

"If you smoke while you are pregnant the baby . . . ."

BELIEF AND ATTITUDE QUESTION:

"If you smoke when you are pregnant the baby inside also smokes"

Yes, No, Maybe, Don't Know, Other

The respondents were paid a ten dollar honorarium.

EXAMPLE OF METHODOLOGY AND RESULTS

The information presented below illustrates the use of the multi-method instrument and gives an indication of the type of results obtained for topics in the Risk Factors and Preventive and Promotive Health Strategies themes of the model. These data are organized as follows:

1. statements obtained from content analysis of the prenatal education materials are presented (these statements were considered to be a standard prenatal health care message).
2. questions evolved from these statements are given in the form used: pictures and probes, sentence completion and belief and attitude questions.
3. responses to the questions are detailed and a brief analysis provided.

MODEL THEME: RISK FACTORS

TOPIC: SMOKING DURING PREGNANCY

Statements from prenatal pamphlets

"Smoking when pregnant can contribute to/cause:"

-miscarriage
-prematurity
-underweight
-stillbirth
-mental and physical defects
-sudden infant death
-infant with respiratory problems

"One cigarette for you equals two for baby"

"Smoking is dangerous for the baby"

Picture and Probe Method

"Someone told the woman that if she smokes it will harm the baby"

Responses	Number
-it will harm the baby	14 (39%)
-I guess it will, I don't know	9 (25%)
-I smoked and the baby was OK	4 (11%)
-I smoked and the baby was not OK	3 (8%)
-It will not harm the baby	2 (6%)
-It is too hard to quit	2 (6%)
-she would think they should mind their own business	2 (6%)

Sentence Completion Method

"If you smoke when you are pregnant the baby . . . ."

Responses	Number
-will have problems	24 (83%)
-will have no problems	3 (10%)
-don't know	2 (7%)

Belief and Attitude Method

"If you smoke when you are pregnant the baby also smokes."

Responses	Number
-Yes	24 (82%)
-No	2 (7%)
-Maybe	3 (10%)

Analysis

Responses obtained from the sentence completion and belief and attitude questions are in agreement with the standard health message concerning smoking and pregnancy, whereas the responses to the picture and probe method show less agreement with the standard message and allow for more variation in response. These qualitative responses may come closer to the respondents actual opinion or behaviours.

MODEL THEME: PREVENTIVE AND PROMOTIVE STRATEGIES

TOPIC: WORRY AND PREGNANCY

Statements from Prenatal Pamphlets

No statements were found; questions were based on the Native Research Team's concerns.

Picture and Probe Method

"If she is upset or worried does she think that the baby will pick up on this?"

Responses	Number
-yes (no elaboration)	20 (74%)
-probably yes	4 (15%)
-no (no elaboration)	3 (11%)

Sentence Completion Method

"When you are pregnant worry will. . ."

Responses	Number
-affect the baby	15 (52%)
-affect the mother	4 (14%)
-affect the baby/mother	4 (14%)
-cause stress	3 (10%)
-don't know/pass	3 (10%)

Analysis

In this instance the replies to the picture and probe and sentence completion were in agreement. The women's responses to the effect that worry has on the outcome of pregnancy indicates that this is an important factor in their explanatory model of health during pregnancy. This issue is of concern to Native women yet it is not mentioned in prenatal education materials.

MODEL THEME: PREVENTIVE AND PROMOTIVE STRATEGIES

TOPIC: LAZINESS DURING PREGNANCY

Statements from Prenatal Pamphlets

No statements were found; questions were based on the Native Research Team's concerns and data in the literature.

Sentence Completion Method

"If you are lazy when you are pregnant the baby . . . ."

Responses	Number
-will be lazy too	13 (45%)
-will be overweight	3 (10%)
-labour will be hard	4 (14%)
-no effect on baby	4 (14%)
-don't know	4 (14%)
-no answer	1 (3%)

Analysis

The Native women's responses to the question concerning the effect on the fetus of the mother being lazy indicates that this is of concern to them. This issue, however, is not mentioned in prenatal education materials. The responses are in agreement with data cited by Milligan (1984) on Navajo beliefs that extra rest should be avoided as inactivity makes the baby big and delivery difficult.

DISCUSSION

The data reported here reflects only initial findings from our study. In this paper we have concentrated on the method used to obtain information from Native women about perceptions of health during pregnancy. In analyzing the data we have considered the women's responses in contrast to the "standard" health message obtained from prenatal education pamphlets.

These data show that responses to picture and probe methods of collecting information were fuller and more elaborate and therefore probably a more accurate representation of the

respondents beliefs and actions than responses obtained from more standard forms of gathering information (e.g. the Likert scale of belief and attitude questions and sentence completion). If only answers from these straightforward methods are considered there is a potential for obtaining an erroneous view of Native women's perceptions of health during pregnancy. In general, the responses to the sentence completion and the belief and attitude questions were similar to the standard health care message. However, the responses to the picture and probe method resulted in elaborated replies that showed difference and variation from the standard message. For example, if the data obtained from the sentence completion and belief and attitude section of the instrument were considered in isolation they would suggest that almost all of the Native respondents agreed that smoking during pregnancy has an effect on the fetus. Replies from the picture and probe method, however, showed that a third of the respondents were not sure if smoking would harm the baby, and that some respondents actually believed that smoking would do no harm. This method further allowed the women to present their personal experiences (they smoked during pregnancy and their baby was fine, or, they smoked during pregnancy and the baby was not fine) and to cite that it is hard to quit smoking. Some even commented that if someone told them that smoking during pregnancy would harm the baby they thought this person should mind their own business.

The information presented also indicates that Native women have certain perceptions regarding their health during pregnancy, such as the impact of worry on the outcome of pregnancy, which are either discounted or unrecognized in prenatal health education materials. In order for effective communication to take place between health care providers and Native women who are pregnant, it is important that these perceptions be further identified and taken into account.

NOTES

[1]This research was a joint project between the Department of Behavioral Science at the University of Toronto and the Native Women's Resource Centre. The Native Women's Resource Centre offers crisis and legal counselling, lifeskill counselling and training, literacy programs, job counselling, housing assistance, and food bank services, as well as cultural programs and activities in support of Native womens' rights.

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