

The process of analysis during a grounded theory study of men during their partners' pregnancies

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This research builds on the work of Barclay (1993) who studied couples during pregnancy and discovered that there was a mismatch between sexual interest levels of men and women during pregnancy. As well, little is known about the social and emotional experiences of men during their partners' pregnancies. One antenatal group consisting of six men, whose partners were in the second trimester of pregnancy, attended a series of five meetings and subsequent individual interviews. Additional data and insights were gained by the researcher and the research assistant attending other antenatal classes with men and women present. The research data consisted of transcripts of tape-recorded interviews, group discussions, observations and field notes made by the researcher and co-leader following each of the group sessions. The aim was systematically to develop a substantive grounded theory which was drawn from the experiences of the men during this transitional period in their lives. This paper discusses the process of analysis which led to the central phenomenon, the core category of the research, around which the grounded theory is built. Five theoretical constructs emerged from the data collected: (a) ambivalence in the early stages of pregnancy, (b) relationship with baby not real, (c) how should I be as a father?, (d) coping with the changing roles and lifestyle, and (e) disequilibrium in relationship with female partner. The last construct emerged as the basic social process. The nature of this relationship changed over the duration of the pregnancy. Emotional turmoil and anxiety in men contributed to the 'mismatch' in male and female expectations of the relationship. The findings of the research suggested that current antenatal classes did not meet the needs of the male partner. It appears that if men and women were informed early in the pregnancy that ambivalence, anxiety and increased tension were common experiences during pregnancy then they could get on with the business of working out how they might effectively deal with these changes.

RATIONALE FOR THE STUDY

Pregnancy, as a major transitional period in adulthood, presents many challenges and stressors for the pregnant couple (Campbell & Field 1989, Bozett 1985). According

to Feldman & Nash (1984), 'one of the most dramatic transitions in the family life cycle, experienced by more than 80% of all adults, occurs between the stages of expectancy and parenthood'. Research undertaken a decade ago demonstrated that an expectant father experiences

developmental processes, stresses and adjustment behaviours that are as individual and diverse as those associated with pregnancy in a woman (May 1982a)

Traditionally, health professionals and researchers have focused on women's physical changes and emotions (Imle 1990). Expectant fathers, also experiencing a transitional period in their lives, participate in antenatal classes often in the prescribed role of support person (May 1982c), are expected to be present at the delivery (Jordan 1990, Bothamley 1990) and to anticipate their partners' needs (Longobucco & Freston 1989).

Research in the area of men's experience of pregnancy has mainly focused on the male's role as a support person. The area which has been neglected is the exploration of the meaning and effects of pregnancy on the male, that is, the emotional, social and sexual changes which occur for them and, as a result, affect the relationship.

Fathers' perceptions

Fathers are expected to help their partners through labour, despite often being unprepared for it (Bothamley 1990). May (1982b) supports the notion that many clinicians and childbirth educators 'hold an unrealistic expectation of fathers, as though there is an "ideal" expectant father'. Current practice in obstetric and midwifery perpetuates these ideas.

There is a dearth of research which examines men's experiences and their responses during pregnancy (Bothamley 1990, Imle 1990, Jordan 1990). The developmental changes experienced by men during pregnancy, if not recognized and dealt with in the antenatal period, may lead to increased stress and impairment of psychological function (Campbell & Field 1989). It appears likely that these changes may have ramifications for the pregnant couple's relationship.

The goal of this research was to report and analyse the social, emotional and sexual changes experienced by men during their partners' pregnancies and examine the implications of these for clinical and educative health services.

Design

The study employed a qualitative design and used a grounded theory approach (Strauss & Corbin 1990, Strauss 1987, Glaser & Strauss 1967) for data collection and analysis. One writer (Stern 1987), claims that 'the strongest case for the use of grounded theory is in investigations of relatively uncharted waters, or to gain a fresh perspective in a familiar situation'. The grounded theory method was seen to be suited to the exploration of the area of men's experiences during pregnancy of their partners' because of the limited nature of our knowledge of this phenomenon.

In this study one group, consisting of six men whose partners were in the second trimester of pregnancy, attended

four meetings. Each of these meetings was of 2 to 3 hours' duration. The meetings occurred over a period of 8 weeks in the rooms of a suburban general medical practice. A fifth meeting was held for the same men 12 weeks later once their babies were all born, at their request. Individual interviews were held with group participants after the final meeting to consolidate the analysis and confirm the accuracy of the researcher's interpretation of the data.

The analysis incorporated aspects of transition theory (Imle 1990, Chick & Meleis 1986) and drew theoretical support and depth from work by Bittman & Zalk (1987), May (1987), Shapiro (1987), Osofsky (1982) and others. This process led to the development of a substantive grounded theory.

Ethical considerations

The suburban general practice gave permission to the researcher to recruit men who were partners of clients who were pregnant, to conduct the research. Permission to conduct this research was also granted by a large public maternity hospital and a community hospital in Adelaide where the researcher observed other antenatal groups.

An information sheet, flyer and consent form were carefully prepared. During their development these forms were subjected to scrutiny by a number of colleagues also doing research, and reviewed by potential participants.

The first names only of those who expressed interest in being involved in the study were recorded. The potential participants were then contacted by telephone. A letter followed confirming acceptance into the group. The address list of the participants was kept in a locked filing cabinet and the key kept in the possession of the chief researcher.

Participants were informed that all the information obtained from the group's contribution would remain anonymous and that the knowledge obtained may benefit others in similar circumstances, through publication of material drawn from the study. The participants were informed that they could have access to the results of the study on request to the researcher. The consent forms were signed by the men at the first group session. Members of the group were informed that they could leave the group at any time.

The information and experiences recorded from the group sessions had no personal identifying characteristics and were kept in a locked filing cabinet. Group members were allocated code names for the computer files, which were protected by a password and accessed solely by the researcher. All audio tapes were destroyed once they were transcribed and coded.

LITERATURE REVIEW

In a grounded theory study, the initial literature review and provisional exploration of relevant concepts provide

the skeleton framework and background for the focus of the research (Strauss & Corbin 1990) Complete immersion in the literature is discouraged in this approach, as preconceived ideas about the precise nature of the phenomena and how this has been interpreted by other researchers can colour the direction of the research

As described by Strauss & Corbin (1990), previous work may help to illuminate where there are 'gaps' in understanding, however, and can assist to 'stimulate theoretical sensitivity, used as a secondary source of data, stimulate questions, direct theoretical sampling, and can be used as supplementary validation'

The literature describes the context for the study, by reporting how the father's involvement has increased over time and has become more actively encouraged. The issues of expectant fathers are discussed with particular reference to this transitional period within the normal developmental family life cycle. Specific focus is given to the changes previously reported in the literature about the disequilibrium experienced by men during the transition to parenthood and the effects of pregnancy on most aspects of their lives

METHODOLOGY

Rationale for using grounded theory

Grounded theory is 'essentially an inductive strategy for generating and confirming theory that emerges from close involvement and direct contact with the empirical world' (Patton 1990) or one that is based on a discovery model of theory development (Chenitz & Swanson 1986). Glaser & Strauss (1967) developed the grounded theory approach in the 1960s when they undertook a study of staff managing dying patients. Glaser & Strauss discovered through the constant comparative analysis of the data that even though patients knew they were dying they felt they could not express their feelings because of an unspoken taboo. Through using this approach the investigators identified a new phenomenon which they called open and closed awareness contexts (Glaser & Strauss 1966). The blocks to communication between staff and the dying patient are now better understood, and improvements have been implemented as a result of this work.

The theoretical basis underpinning grounded theory is symbolic interaction. This originated from the work of Mead (1934) and Blumer (1969). Grounded theory can be applied as a method for data collection and analysis with interpretations and theoretical links to other fields such as ethnography and nursing (Strauss & Corbin 1990). In this research, transition theory has been used to interpret and explain the analysis of data.

Qualitative approach

Grounded theory is a qualitative approach which incorporates a number of distinct features. Key elements of this include specific sampling and data collection techniques and processes used in analysis which ensure rigour and comprehensiveness. These include the making of constant comparisons and the use of a coding paradigm to ensure conceptual development and density (Strauss 1987). The formation of theory occurs around a central category (Strauss 1987). Analysis of data aims to discover the dominant themes and later generate a conceptual framework which underpins the emerging theory (Glaser & Strauss 1967).

Fit, understanding, generality and control are the four central criteria essential for appraising the applicability of theory to a phenomenon in a well constructed grounded theory (Glaser & Strauss 1967). The researcher aims to capture all of the variation in the phenomenon under study and to look at all of the conditions under which the phenomenon occurs, as well as conditions under which it changes.

Data collection, examination, coding, categorizing, conceptualizing and writing all occur at the same time (Glaser & Strauss 1967). Hypotheses and theories materialize from the data set, while the data collection is proceeding, and concurrently with data analysis. Strauss & Corbin (1990) describe a rigorous process necessary for grounded theorists.

Sample

Selection of potential participants occurred from names supplied from the general middle-class medical practice 'Purposeful sampling' (Patton 1990), that is sampling where the phenomenon is known to exist, was used. 'Purposive sampling of the study participants is used to obtain maximum information and a full array of responses' (Woods & Catanzaro 1988). Theoretical sampling (Strauss & Corbin 1990) continued once the core category was identified from the initial data collected. This was based on the requirement to gather more data to contrast, compare and verify the categories while ensuring that representativeness continues.

Plan for the outline of sessions

The first two sessions were planned around a framework of discussions of the three trimesters of pregnancy. In order to minimize leader dominance, every effort was made to allow the men themselves to determine the direction of the conversations within the given framework for the session.

One method was the use of open-ended questioning. 'The purpose of gathering responses to open-ended questions is to enable the researcher to understand and capture the

points of view of other people without predetermining those points of view through prior selection of questionnaire categories' (Patton 1990) Examples of these questions are provided under data collection and group process

The researcher and co-leader decided to include two sessions on labour and delivery and the postpartum period for the benefit of the participants. An additional session was included at the request of the participants who wanted to meet after their babies were born.

Data collection

Data from the suburban general practice group was collected over a period of 6 months. In addition, over 80 hours of observation of public hospital, independent midwife and private hospital classes occurred. As recommended by Hutchinson *et al* (1986), the researcher maintained a personal diary. In this was recorded her personal experiences and reactions. This enabled her to reflect on entries, to keep personal biases in perspective and to remain as open-minded as possible towards the participants.

The data from the group discussions were transcribed verbatim with all identifying characteristics removed and other names were substituted. The data were entered into the 'Non-numerical Unstructured Data Indexing, Searching and Theorising' (NUDIST) computer program format. NUDIST is a software system for managing, organizing and supporting research in qualitative data analysis. When printed, all the lines of data were numbered which facilitated open coding and re-entering the data into the computer in a form which could be retrieved in any order or combination. The process used for coding and categorizing and then analysing the data followed that recommended by Strauss & Corbin (1990).

The researcher and co-leader verified the major themes which emerged from preliminary analysis of the tape of the previous session before beginning each subsequent session. The categories and theory that emerged from the data were also verified with the men who participated in the group during follow-up individual interviews. Additional data were added from the follow-up interviews and incorporated into the results and story line where appropriate. This was done in the final stages of the analysis.

Data analysis

Only the pertinent sections of the discussions were included in the data analysis. For example, the housekeeping details of each session, and the description of the process of labour and delivery contributed by the leaders in the third session, were excluded. Information from the last session, which was held after the babies were born, was included in the data analysis when it linked with and strengthened emerging themes from the previous sessions.

The data were collected, and initially coded with *in vivo*

or substantive codes (Strauss & Corbin 1990). This involves 'naming the phenomena'. Each word, line, paragraph was examined thoroughly to discover and label the phenomena being described. This first level of coding aimed at encapsulating the participant's own meanings as succinctly as possible.

Sometimes the actual words used by the participants were used to name the concepts. This enabled the researcher to avoid assigning her own meaning to the phenomena and ensured that the concepts derived were those of the participants themselves. The concepts were written in the margin of the data coding sheet and combined with any relevant field notes or researcher deductive reasoning. The process also involved making comparisons when identifying, clarifying, categorizing and/or differentiating concepts.

Codes

The descriptive codes evolved further as the analysis progressed and therefore were included in the second level of analysis. Categories in grounded theory are pitched at a more abstract level than concepts. All the concepts are grouped within the category, according to their 'fit'. Categories are more abstract than descriptive concepts, and require deeper analysis and interpretation of the data (Strauss & Corbin 1990). This process reduces the number of units with which to work. Categories are meaningful clusters of concepts which seem to 'fit' within the identified category (Strauss & Corbin 1990), as Table 1 demonstrates.

The researcher worked extensively with the properties, and the dimensions of those properties, within each category. Properties and their dimensions form the basis for linking categories and sub-categories. Properties are the attributes or characteristics of a category (Strauss & Corbin 1990).

Axial coding then took place which is the process of relating sub-categories to a category, and categories to each other, around a complex process of inductive and deductive thinking involving several steps (Strauss & Corbin 1990). The process required repeated re-examination of the data and their interpretation and repeated comparisons were made of the data. Axial coding is geared towards discovering and relating categories in terms of the paradigm model (Strauss & Corbin 1990).

At this stage of the analysis the researcher investigated the casual conditions for each particular concept. After that the context, that is the specific set of properties that pertain to phenomena, was outlined. The intervening conditions, that is the 'broader structural context pertaining to a phenomena [*sic*]' (Strauss & Corbin 1990), were considered. The consequences — that is, 'the outcomes or results of action and interaction' (Strauss & Corbin 1990) — were also thoroughly investigated.

Questions were asked of those data in this final stage of

regrouping and integrating categories What was going on? What were the properties? Under what conditions and with what consequences did it work? How did it happen? Where is it leading to and what does it mean (Strauss & Corbin 1990, Denzin 1989, Stern & Pyles 1985, Glaser & Strauss 1967) Artimien (1982) agrees that 'tentative theoretical statements can be made only when an attempt is made to link the causes and consequences of the variables identified in the social phenomenon'

The coding, analysis of data and theorizing occurred simultaneously Logic diagrams (Strauss & Corbin 1990) made by the researcher helped to uncover the relationships between categories Memos were written throughout the process to guide thinking and to record analytical insights and interpretations that emerged (Stern & Pyles 1985) This record provided a history of the process of analysis which was incorporated within the next level of theoretical construct development

Following the process of analysis outlined above, the researcher employed the steps of reduction, selective sampling of the literature, and selective sampling of the data for the purpose of describing the analysis and presenting substantiation for the conclusions drawn 'In the beginning, one's hypotheses may seem unrelated, but as categories and properties emerge, develop in abstraction and become related, their accumulating interrelations form an integrated central theoretical framework, the core of the emerging theory' (Glaser & Strauss 1967) Using the data, the underlying explanation of the process the data exemplified and described was articulated into a story line and theory

Credibility refers to the believability, fit and applicability of the findings to the phenomenon under study (Glaser & Strauss 1967) The participants of the group at the suburban general practice were interviewed individually a second time for their responses to the researcher's interpretation of the data, and their comments were included so as to substantiate and help refine the emerging theory Credibility was achieved when the participants agreed that the explanation developed by the researcher reflected what they had intended to say (Sandelowski 1986) An experienced person trained in psychology, currently working in the fields of counselling and education in health, verified the coding process and confirmed that the concepts, categories and theoretical constructs derived from the data were not idiosyncratic to the researcher

RESULTS

Table 1 presents a key element evident in the transcripts of the group when the early stages of pregnancy were discussed Ambivalence, stereotyping and anxiety were the categories which emerged from the concepts derived in open coding and the theoretical construct 'ambivalence in the early stages of pregnancy' emerged

The next concepts to emerge from open coding were

Table 1 The concepts and categories leading to the theoretical construct 'ambivalence in the early stages of pregnancy'

Concept	Category	Theoretical construct
Criticizing	Ambivalence	Ambivalence in the early stages of pregnancy
Mixed feelings		
No affinity		
Disinclined		
Preoccupation	Stereotyping	Ambivalence in the early stages of pregnancy
Getting old		
Fearing		
Hoping		
Difficulties	Anxiety	

those of 'no emotional tie', 'feels separate', 'it's hard to relate' and 'baby not real' These led to the category 'not relating' and finally to the theoretical construct of 'relationship with baby unreal' (Table 2)

The third theoretical construct to emerge was 'how should I be as a father?' The concepts of 'unknown territory', 'getting old', 'being unselfish', 'learning' and 'isolating' were clustered in the category 'who am I becoming?' Another category 'intergenerational experience' was drawn from the concepts of 'childhood', 'youth', 'parents', 'other families' and 'loss' (Table 3)

The fourth theoretical construct 'coping with changing roles and lifestyle' emerged from the concepts and categories shown in Table 4

The categories of 'confusion', 'age-stereotyping', 'constant changing', 'resisting' and 'awareness' were drawn from the concepts in Table 4 above and the theoretical construct 'coping with changing roles and lifestyle' was formulated

The fifth theoretical construct 'disequilibrium in relationship with female partner' was drawn from the categories 'discrepant needs', 'alienation', 'not in tune', 'prioritizing', 'mood swinging' and 'noticing' The concepts which fed into these categories are illustrated in Table 5

STORY LINE

The story line is the core category, that is 'the central phenomenon around which all the other categories are

Table 2 The concepts and categories leading to the theoretical construct, 'relationship with baby unreal'

Concept	Category	Theoretical construct
No emotional tie	Not relating	Relationship with baby not real
Feels separate		
It's hard to relate		
baby not real		

Table 3 The concepts and categories leading to the theoretical construct 'how should I be as a father?'

Concept	Category	Theoretical construct
Unknown territory	Who am I becoming?	How should I be as a father?
Getting old		
Being unselfish		
Learning		
Isolating	Intergenerational experiencing	
Childhood		
Youth		
Parents		
Other families		
Loss (grieving)		

Table 4 The concepts and categories leading to the theoretical construct 'coping with changing roles and lifestyle'

Concept	Category	Theoretical construct
Differing lifestyle	Confusion	Coping with changing roles and lifestyle
Traditional upbringing		
Preparing for baby		
Babyboomer aspirations		
Comparing	Age-stereotyping	
Prioritizing		
Nothing changing		
Changing not obvious		
Cruising	Constantly changing	
Generalizing		
Deciding		
Changing chores		
Changing independence		
Changing traditions		
Changing emotions		
Preoccupation		
Changing		
Losses		Resistance
Disappointing		
Missing the obvious		
Keeping in touch	Awareness	
Filling the gaps		

integrated' (Strauss & Corbin 1990) and around which the grounded theory is built. The core category in this study emerged from data demonstrating the relationship in a state of disequilibrium as the man works at becoming a father. He feels he needs support and help from his partner to manage the changes that are occurring in their lifestyle and relationship, but she is focusing on the growing fetus within and on her process of change. He believes that he has been left out and feels separate from her and the pregnancy. Relatives, health professionals and others contribute to this feeling of isolation with their comments about the pregnancy and the provision of health services which mainly focus on the mother and her fetus.

Many losses

There are many losses for the male during pregnancy and the gains are difficult to realize, especially in the first half of the pregnancy while the baby is still not real to him. There is also the loss of a previous role and lifestyle, and nothing is predictable any more.

His partner expects him to be more involved but she is not communicating her needs in a direct or clear way, and he is unsure of how to respond. With his partner becoming 'more emotional' their sexual relationship is diminishing and this adds to the feeling of distance occurring between the couple.

Table 5 The concepts and categories leading to the theoretical construct 'disequilibrium in relationship with female partner'

Concepts	Categories	Theoretical construct
Controlling		
Philosophizing		
Stereotyping		
Focusing		
Ambivalence		
Rivalry		
Physically changing		
Distancing		
Pressuring		
Appreciating		
Teaming up		
Not teaming up	Discrepant needs	
Cruising		
Changing relationship		
Relationship mismatching	Alienation	
Not considering/resisting		
Overreacting		
Discounting		
Overwhelming		
Breaching		
Avoiding	Not in tune	Disequilibrium in relationship with female partner
Supporting		
Preparing		
Financial	Prioritizing	
Sharing loss		
Sexual mismatching		
Isolating		
Responding	Mood swinging	
Fluctuating		
Normal oscillating		
Subconsciously guilty		
Physically attracting	Noticing	

The man wants reassurance that everything in their relationship will return to normal once the baby is born but this has not been discussed by anyone. In addition, everyone else seems to expect him to take on a supportive and nurturing role without acknowledging his needs or giving him the support he needs.

References

Artunian B (1982) Conceptual mapping development of the strategy *Western Journal of Nursing Research* 4(4), 379-393

Barclay L (1993) *Sexuality and pregnancy challenge to relationships* Unpublished thesis

Bittman S & Zalk S R (1987) *Expectant Fathers* Hawthorn Books, New York

Blumer H (1969) *Symbolic Interactionism Perspective and Method* Prentice Hall, Englewood Cliffs, New Jersey

Bothamley J (1990) Are fathers getting a fair deal? *Nursing Times* 86(36), 68-69

Bozett F W (1985) Male development and fathering throughout the life cycle *American Behavioral Scientist* 29(1), 41-54

Campbell I E & Field P A (1989) Common psychological concerns experienced by parents during pregnancy *Canada's Mental Health* 37(1), 2-5

Chenitz W & Swanson J (1986) *From Practice to Grounded Theory Qualitative Research in Nursing* Addison-Wesley, Menlo Park, California

Chick N & Meleis A F (1986) Transitions a nursing concern In *Nursing Research Methodology Issues and Implementation* (Chinn P L ed), Aspen, New York, pp 237-253

Denzin N K (1989) *The Research Act A Theoretical Introduction to Sociological Methods* Prentice Hall, Englewood Cliffs, New Jersey

Feldman S S & Nash S C (1984) The transition from pregnancy to parenthood impact of the firstborn child on men and women *Sex Roles* 11(1/2), 61-78

Glaser B G & Strauss A L (1966) *Awareness of Dying* Aldine, New York

Glaser B G & Strauss A L (1967) *The Discovery of Grounded Theory Strategies for Qualitative Research* Aldine, New York

Hutchinson S, Munhall P L & Oler C J (1986) *Grounded Theory The Method in Nursing Research A Qualitative Perspective* Appleton-Century-Crofts, Norwalk, Connecticut

Imle M (1990) Third trimester concerns of expectant parents in transition to parenthood *Holistic Nursing Practice* 4(3), 25-36

- Jordan P L (1990) Laboring for relevance expectant and new fatherhood *Nursing Research* 39(1), 11-16
- Longobucco D C & Freston M S (1989) Relation of somatic symptoms to degree of paternal-role preparation of first-time expectant fathers *Journal of Obstetrics, Gynaecology, Neonatal Nursing* 18(6), 482-488
- May K A (1982a) Factors contributing to first time fathers' readiness for fatherhood an explanatory study *Family Relations* 31, 353-361
- May K A (1982b) The father as observer *MCN The American Journal of Maternal Child Nursing* 7, 3
- May K A (1982c) Three phases of father involvement in pregnancy *Nursing Research* 31, 337-342
- May K (1987) Men's sexuality during the childbearing year implications of recent research findings *Holistic Nursing Practice* 1(4), 60-66
- Mead G H (1934) *Mind, Self and Society From the Standpoint of a Social Behaviourist* (Morris C W ed), University of Chicago Press, Chicago
- Osofsky H (1982) Expectant and new fatherhood as a developmental crisis *Bulletin of the Menninger Clinic* 46(3), 209-230
- Patton M Q (1990) *Qualitative Evaluation and Research Methods* Sage, Newbury Park, California
- Sandelowski M (1986) The problem of rigor in qualitative research *Advances in Nursing Science* 8(3), 27-37
- Shapiro J L (1987) *When Men are Pregnant Needs and Concerns of Expectant Fathers* Impact Publishers, San Luis, California
- Stern P N & Pyles S (1985) Using grounded theory methodology to study women's culturally based decisions about health In *Women, Health, and Culture* (Stern P N ed), Hemisphere, Washington, pp 1-24
- Stern P N (1987) Grounded theory methodology its uses and processes In *Nursing Science Methods A Reader* (Gortner S R ed), Regents, University of California, San Francisco, pp 79-88
- Strauss A L (1987) *Qualitative Analysis for Social Sciences* University Press, New York.
- Strauss A & Corbin J (1990) *Basics of Qualitative Research Grounded Theory Procedures and Techniques Practices* Sage, Newbury Park, California
- Woods J F & Catanzaro M (1988) *Nursing Research Theory and Practice* C V Mosby, Washington, DC