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Fears and Feelings During Pregnancy: A Cross Cultural Study

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Abstract

Cross cultural differences in the emotional reactions and fears expressed by women during pregnancy, after birth and in the early months of parenthood were explored. Three culturally different groups of women were interviewed at about three months postpartum regarding their transition to parenthood experiences.

Results indicate cultural variability in reaction during pregnancy but little difference in reaction to the baby after delivery and in the early months of parenthood.

Zusammenfassung

Die kulturellen Unterschiede in den gefühlsmäßigen Reaktionen und Ängsten von Frauen während der Schwangerschaft, nach der Geburt und in den ersten Monaten der Elternschaft werden erkundet. Drei kulturell verschiedene Gruppen von Frauen wurden drei Monate nach der Geburt interviewt und nach ihren Erfahrungen beim Übergang zur Elternschaft befragt.

Die Ergebnisse zeigen kulturelle Unterschiede in den Reaktionen während der Schwangerschaft, aber nur geringe Unterschiede in den Reaktionen auf das Baby nach der Geburt und während der ersten Monate der Elternschaft.

Introduction

A variety of emotional reactions occur during pregnancy and have, for decades, been regarded as normal[1–3]. For example a certain amount of anxiety during pregnancy is usual. Such anxiety may center around fears, for example, of hav-

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ing a malformed baby, of miscarriage, of twins, of the fetus dying in utero, for one's own health, of dying in labour, of the hospital or of doctors, of losing one's figure through the pregnany or nursing, of losing sexual attraction or function through stretching or tearing, of losing one's husband's affection, of damage to the fetus through an unsuccessful attempted abortion, or even thoughts of one, of bad hereditary showing, of the effects of a shock in pregnancy on the fetus, and that having some illness such as diabetes may affect the baby.

In addition to such fears, other emotional, cognitive and behavioural changes take place during pregnancy such as cravings for specific foods, insomnia, fatigue, increased feelings of insecurity and dependency, increased introversion and narrowing of interests, feelings of loneliness, increased irritability, mood swings including rejection of the pregnancy, impatience and increased physical discomfort [1].

While these various emotional, cognitive and behavioural changes have been reported during normal pregnancy few have reported a common pattern of response, and particularly emotional response, during pregnancy. Most investigators appear to assume that a woman's response to pregnancy is individually determined by her personal situation.

The present study explores some emotional reactions commonly reported by women during pregnancy with a view to determining any commonality of emotional response. In addition, three culturally different groups of women are studied in an attempt to ascertain whether emotional reactions to pregnancy are similar in women of different cultures.

Procedure

Subjects

Sampling: Details of the procedures followed and the rationale behind them have been reported elsewhere [4]. Only methodological information necessary for an understanding of the study is given here.

Women were randomly selected from birth registers of White, Mixed cultural origin women and Indian women during the period September 1987 to December 1988. Home visits were undertaken by Public Health Nurses to all women selected within weeks of their baby's birth. At this visit, the nature of the study was explained to women and they were asked to participate. Agreement would involve women in a one and a half hour interview at about the time their child was three months old. A signed, informed consent form was obtained.

Of the 194 White women randomly selected form the birth records by the City Health Department, 18 had moved and were untraceable, 52 refused to participate, 2 women's babies had died, 1 woman was receiving intensive psychological treatment and 4 could not be interviewed due to language incompatibility. When approached by the interviewers approximately two to three months later a further 41 had moved and 1 declined to participate. Three of the final interview schedules were incomplete and were excluded from the data analyses which, therefore, were performed on the responses of 72 women.

City Health authorities randomly selected 180 women of Mixed cultural origin from birth records. Of these 24 had moved by the time of the health care worker's visit, 20 refused to participate in the study, two women's babies had died and 1 woman could not be interviewed because of language difficulties. A further 56 could not be traced at the time of the later interview and 1 refused to participate at this point. Five additional records were excluded from the data analysis as too incomplete for inclusion leaving a final sample of 70 women.

Even more difficulties in tracing subjects occurred with the sample of Indian women. City Health authorities selected 153 women from the birth registers of Indian women. At the time of the health worker's visit 30 of these had moved, 39 refused to participate in the study, 1 was experiencing psychological distress and 1 woman's baby had died.

At the time of the interviewer's visit later, 40 additional women were unable to be interviewed. Of these 4 declined to be interviewed as they were working and could not make time available, 5 declined to participate on the grounds of no interest in the study, 5 women's husbands refused to allow them to participate, 3 lived in areas which proved to be dangerous for the interviewer to visit during evening hours and a further 21 were untraceable. Two additional women agreed to be interviewed but the interviewer was unable to complete these interviews due to the women's emotionality during the interview. A total of 42 of the original randomly selected sample were interviewed.

Additional Indian women were recruited into the sample through community post-natal clinics. Women attending the clinic whose babies were approximately two to three months old were asked to participate in the study. In all 37 women in the final sample were recruited in this manner, yielding a total sample of 79 Indian women.

The additional method of obtaining subjects in the Indian sample could well have incurred bias as subjects were drawn only from clinic attenders. Nevertheless, it is not certain that those women agreeing to participate from the original randomly selected sample of birth records were not also a biased sample due to the high refusal rate occurring in this group. It is most probable that only women less bound by traditional customs of privacy surrounding birthing experinces and, particularly, family affairs, would have agreed to participate in this study.

In addition many Indian women follow traditional customs of remaining with their mother (in-law) in the months following birth and would have been excluded from the sample and recorded as "moved" by the city health visitors. This source of bias would have, in all probability, also led to the study of a less traditionally bound sample of Indian women than occurs in the general population.

Inability to trace women occurred in all groups. In all, 31.4% of White women, 40% of Mixed cultural origin women and 33.3% of Indian women could not be traced for interview. Reasons contributing to the inability to find these women included dependence on city health personnel's first post-natal visit as the initial recruitment method; non availability of a telephone; and incomplete addresses on records.

Refusal to participate was another sampling difficulty occurring in all groups. More Indian women refused to participate (34.6%) than Mixed cultural origin women (11.7%) and White women (27.8%).

Factors contributing to women's refusal to participate were returning to work and not being willing to be interviewed outside of work hours; recent participation in other research being conducted through clinics and unwillingness to be part of yet a further study; and husbands' refusal to allow participation. Demographic information available did not distinguish between women who agreed or refused to participate.

Biographical Characteristics: The mean age of the sample was 29.4 years (SD = 7.79). Most of the sample were married (78%) either by Western custom (51.2%) or by traditional custom (5.1%) or by a combination of both (21.7%). Few were unmarried and either living alone or with their parents (12.4%) or with their partner (4.2%). Indian women were the only ones reporting traditional marriage customs while Mixed cultural origin women made up the majority of the unmarried women.

Of the women 34.1% had recently given birth to their first baby and the remainder were multiparous. Major groups of women reported themselves as either housewives (47.3%) or students (26.5%). White women had achieved higher educational levels (only 11.3% did not complete 12 years of schooling) than Indian (20.2%) or Mixed cultural origin women (25.5%). The educational levels of the women's partners followed a similar pattern.

The most commonly reported religious affiliations were Catholic (13%) and Protestant (19.3%) (predominantly White and Mixed cultural origin women), Jewish (6.3%) (mainly White women) and Moslem (25.1%) (pedominantly Indian women).

Of the Indian women 78.3% were Moslem and 21.7% Hindu. This reflects a greater proportion of Moslem and a lesser proportion of Hindu women in the sample than is representative of the general population[5] confirming that some bias is evident in the sample. Data reported as reflecting the experiences of Indian women, therefore, are more representative of Moslem women than Indian women in genrral.

Methods

Questionnaire development: The questionnaire used in this study explored women's attitudes, knowledge and practices regarding conception, pregnancy, birth and the early months of parenthood although only findings pertaining to women's fears and feelings are given here. The questionnaire was based on interview schedules used in previous research into African birth customs[6], infant feeding practices amongst women of Mixed cultural origin[7] and research on White women's adjustment to parenthood[8].

Input from health care professionals as well as from women in each of the three cultural groups was also obtained in the process of developing the final research questionnaire. The questionnaires were pilot tested for claritiy of questions and ease of administration before use.

The final questionnaire used as the basis for the structured interviews contained 292 items. These items yielded approximately 1670 data points per case. Of these items, 38 referred to biographical details, 22 to events surrounding conception, 18 to behaviour during pregnancy, 19 to birth itself, 10 to the immediate post-partum hospital stay, 17 to the time of going home after delivery, 94 to aspects of infant feeding and care, 11 to the mother-infant relationship and 9 to the marital relationship / partnership. A further 24 items explored knowledge about experiences, 28 social support during the period of transition to parenthood and 12 work related issues. An additional 32 items related specifically to Indian customs and beliefs. Only results pertaining to women's emotional reactions during their transition to parenthood are reported here. Copies of the questionnaire are obtainable from the author.

Few items were open ended with almost all subjects' responses falling into preset possible alternatives. Where subjects' responses differed these were recorded as close to verbatim as possible and later coded.

The questionnaires were in English only. The high cost of back-translation of such a lengthy questionnaire rendered translation into many other languages unfeasible. Instead, interviewers were asked to ensure that the meaning or intention of each question was clearly understood by interviewees. All interviewers were required to be bilingual. The method of interviewing followed closely resembled that adopted by Craig and Albino [9].

Interviewers: Two women of each cultural group conducted interviews for women of their own culture. Interviewers were trained on interviewing techniques as well as on the details of the interview schedule itself.

With the exception of one of the White interviewers who was a qualified social worker working in the field of childbirth all interviewers were registered midwives.

Interviewers were asked to tape record interviews whenever possible, with women's permission. Almost all women in the Indian and the Mixed cultural origin groups, and many White women, however, while willing to be interviewed did not want the interview to be recorded. The 17 interviews (16 White and 1 Indian) that were recorded were checked by an independent, post-graduate social science student, for errors of transcribing women's statements onto the interview schedule. Only 10 errors in the transcribing of the 28390 data points involved in these 17 questionnaires were detected in this manner. It appears that the reliability of the two White interviewers in recording data correctly is satisfactory. It was unfortunately not possible to obtain similar assessments of the Indian and Mixed origin group interviewers without jeopardizing the subject participation rate.

Ethical Approval

The study was approved by the Committee for Research on Human Subjects of the University of the Witwatersrand before commencement.

Permission was obtained form City Health authorities for access to birth registers and for recruiting Indian subjects through post-partum clinics.

Statistical Analyses

Most data recorded was categorical in nature: some information yielded continuous data. All information was, in the first instance, analyzed in terms of measures of central tendency and has been reported as percentages or as means. Cross cultural comparisons of frequencies were obtained by means of the Likelihood Ratio Chi Square test. All p values reported in the text refer to the outcome of this statistical procedure.

When many associations are studied there is an increased likelihood of Type 1 error. Whether or not one corrects statistically for the effect of multiple comparisons is debatable [10]. The analyses presented here have not adjusted for multiple tests of comparison. The obvious multiple cultural differences evident in the sample to begin with render differences between groups a logical outcome. Statistically significant differences between groups are therefore to be expected: of more interest are the comparisons which, in fact, yield evidence of no difference between groups despite the acknowledged social, economic, educational, religious and cultural differences in the samples.

Results

Feelings During Pregnancy

Pregnancy appeared to be associated with increased emotionality in some women. Feelings which were reported as occurring more often in pregnancy than at other times are included in Table 1. White women reported being excited and proud about pregnancy more often than others but also more emotional, irritable and weepy. Indian women reported being happy as well as anxious most often.

Table 1. Feelings occuring during pregnancy % (N)

Feeling	Total	White	Mixed	Indian	P
Excited	63.5 (120)	76.1 (54)	50.9 (29)	60.7 (37)	.01
Happy	62.6 (122)	67.6 (48)	39.0 (23)	78.5 (51)	.0001
Irritable	50.8 (93)	59.7 (43)	44.1 (26)	46.2 (24)	NS
Proud	48.6 (88)	52.9 (37)	46.6 (27)	45.3 (24)	NS
Emotional	44.4 (80)	56.9 (41)	30.4 (17)	42.3 (22)	.01
Weepy	41.9 (72)	49.3 (35)	39.0 (23)	33.3 (14)	NS
Anxious	39.4 (74)	38.0 (27)	31.7 (19)	49.1 (28)	NS
Afraid	31.9 (58)	25.4 (18)	40.3 (25)	30.6 (15)	NS
Dependent	28.3 (49)	22.1 (19)	34.4 (21)	21.4 (9)	NS
Cross	27.7 (47)	26.8 (19)	28.6 (16)	27.9 (12)	NS
Unhappy	24.2 (40)	15.9 (11)	39.3 (22)	17.5 (7)	.006
Insecure	22.9 (38)	23.2 (16)	25.9 (14)	18.6 (8)	NS
Angry	20.7 (35)	10.0 (7)	31.0 (18)	24.4 (10)	.009
Sad	18.1 (30)	8.7 (6)	30.4 (17)	17.1 (7)	.02
Embarrased	18.0 (31)	11.3 (8)	28.3 (17)	14.6 (6)	.04
Ashamed	15.7 (26)	8.7 (6)	31.6 (18)	5.0 (2)	.0001

Table 2. Fears experienced during pregnancy % (N)

Fear of	Total	White	Mixed	Indian	P
Abnormality	66.0 (132)	76.4 (55)	52.3 (34)	68.3 (43)	.01
Pain in labour	51.3 (100)	36.1 (26)	49.2 (30)	71.0 (44)	.0001
Miscarriage	49.7 (95)	54.2 (39)	42.9 (27)	51.8 (29)	NS
Labour	49.5 (98)	31.9 (23)	49.2 (31)	69.8 (44)	.0001
Caesarean section	46.7 (87)	34.7 (25)	52.5 (32)	56.6 (30)	.03
Waters breaking in public	44.4 (83)	34.7 (25)	46.9 (30)	54.9 (28)	.07
Baby dying	44.1 (82)	44.4 (32)	40.3 (25)	48.1 (25)	NS
Delivery before arrival at hospital	39.9 (75)	23.6 (17)	46.2 (30)	54.9 (28)	.001
Harming the baby	34.3 (61)	33.3 (24)	44.3 (27)	22.2 (10)	NS
Dying in labour	34.0 (64)	19.4 (14)	42.2 (27)	44.2 (23)	.003
Induction	32.8 (58)	27.2 (16)	37.3 (22)	43.4 (20)	.04
Episiotomy	31.9 (58)	23.6 (17)	34.4 (21)	40.8 (20)	NS
Vaginal examination	31.9 (58)	16.7 (12)	30.5 (18)	54.9 (28)	.0001
Bleeding in public	31.8 (57)	16.7 (12)	41.0 (25)	43.5 (20)	.001
Intercourse during pregnancy	31.0 (56)	23.6 (17)	31.7 (19)	40.8 (20)	NS
Stretch marks forming	30.5 (54)	22.2 (16)	41.7 (25)	28.9 (13)	.05
Not being a good mother	27.9 (50)	31.9 (23)	26.7 (16)	23.4 (11)	NS
Hospital	23.9 (43)	16.7 (12)	20.3 (12)	36.8 (19)	.02
Enemas	18.3 (32)	15.3 (11)	13.6 (8)	29.6 (13)	NS
Husband not being attracted to them	17.6 (31)	18.1 (13)	16.4 (10)	18.6 (8)	NS
Husband being unfaithful	16.3 (29)	5.6 (4)	23.0 (14)	24.4 (11)	.003
Doctors	15.0 (26)	5.6 (4)	22.0 (13)	21.4 (9)	.008
Unattractive baby	14.3 (25)	9.7 (7)	16.7 (10)	18.6 (8)	NS

Women of Mixed cultural origin reported greater frequencies of many emotions including feeling unhappy, ashamed, sad, insecure, dependent, cross, angry, embarrassed and afraid. Significant differences occurred between the groups on 7 of the 16 emotions explored.

Fears occurred frequently amongst all women as well. Indian women expressed fears more often than other women on 20 of the 23 fears explored (Table 2). Fears of abnormality and miscarriage were reported most often by White women and fears of harming the baby more often by women of Mixed cultural origin. Significant differences between cultural groups' fears occurred on 14 of the 23 fears examined.

Some differences also occurred between the groups with regard to the "minor" problems of pregnancy frequently experienced by women (Table 3). White women were more likely to report experiencing nausea, extreme tiredness, emotionality, irritability and indigestion than other women. Indian women reported

Table 3. "Minor" problems of pregnancy % (N)

Problem	Total	White	Mixed	Indian	P
Back pain	61.7 (132)	53.5 (38)	60.0 (42)	71.2 (52)	NS
Extreme tiredness	61.4 (132)	77.8 (56)	47.1 (33)	58.9 (43)	.001
Irritability	54.2 (116)	64.8 (46)	50.0 (35)	48.0 (35)	NS
Sleep disturbances	48.6 (104)	56.3 (40)	32.9 (23)	56.2 (41)	.005
Indigestion	48.2 (104)	63.9 (46)	38.6 (27)	41.9 (31)	.004
Emotionality	43.3 (93)	68.1 (49)	30.0 (21)	31.5 (23)	.0001
Nausea and vomiting	43.3 (93)	37.5 (27)	37.1 (26)	54.8 (40)	.05
Nausea	40.9 (88)	59.7 (43)	35.7 (25)	27.4 (20)	.0001
Food cravings	35.8 (77)	33.3 (24)	42.9 (30)	31.5 (23)	NS
Depression	27.1 (58)	21.1 (15)	32.9 (23)	27.4 (20)	NS

vomiting and back pain more often than others and women of Mixed origin food cravings and depression.

Feelings After Birth

There were no differences between the groups in terms of the development of feelings of love for the baby after birth with almost three-quarters of the women feeling love the moment they first saw their babies (Table 4). A number of women reported taking a few hours to feel warmth towards their babies and some required days or even weeks before feelings of love developed.

Table 4. Feelings of love for the baby after birth % (N)

When "love" felt	Total	White	Mixed	Indian	P
Moment first saw baby	71.1 (156)	63.9 (46)	72.9 (51)	76.3 (58)	NS
First few hours	16.1 (35)	16.7 (12)	17.1 (12)	14.5 (11)	NS
First few days	6.9 (15)	13.9 (10)	4.3 (3)	2.6 (2)	NS
Weeks later	2.3 (5)	1.4 (1)	2.9 (2)	2.6 (2)	NS
Months later	3.6 (8)	4.2 (3)	2.9 (2)	3.9 (3)	NS

Mothers' predominant reaction to their first sight of the baby was relief (Table 5) with love and surprise also being expressed. More unpleasant reactions such as feeling stunned, disappointed or despairing were more common amongst White women but were infrequently mentioned as first reactions to their babies.

Feelings in the Post-partum Period

There were no major differences between the groups in terms of feelings experienced during the post-partum period. Feelings reported by large numbers of women in the first few post-natal months included pride (N = 164), excitement (N = 154), self assurance (N = 90), happiness (N = 173), being loved and fussed

Table 5. First impressions of the baby % (N)

First reactions	Total	White	Mixed	Indian	P
Relief	48.1 (101)	21.1 (15)	54.6 (36)	68.5 (50)	.0001
Love	16.7 (35)	15.5 (11)	13.6 (9)	20.6 (15)	.0001
Surprise	15.2 (32)	15.5 (11)	25.8 (17)	5.5 (4)	.0001
Stunned	4.8 (10)	9.9 (7)	3.0 (2)	1.4 (1)	.0001
Despair	1.9 (4)	2.8 (2)	1.5 (1)	1.4 (1)	.0001
Disappointment	1.0 (2)	2.8 (2)	0 (0)	0 (0)	.0001

over (N = 85), and feeling fit and healthy although overweight (N = 67). At the same time many women reported the more negative feelings of anxiety (N = 82), insecurity (N = 32), worry (N = 61), weepiness (N = 52), tiredness (N = 113), being overwhelmed (N = 74) and depressed (N = 125). Feelings of depression lasted for only one week amongst 79.2% of those reporting this reaction. Other unpleasant feelings expressed by some women included being unprepared (N = 24), sad (N = 21), neglected (N = 20), angry (N = 17), disappointed (N = 11) and a 'failure' (N = 7).

Discussion

Women expressed a variety of emotional reactions during pregnancy with differences between cultural groups being apparent. Fears were also commonly experienced and, at least, expressed more often by Indian women. All women experienced so called "minor" problems of pregnancy but which symptoms were reported most often appeared to be culturally determined.

Women's reactions to the baby immediately after birth as well as to the first few months of parenthood were similar in all cultural groups examined. Both positive and negative emotions were experienced.

It is of interest that greater discrepancies between cultural groups' reactions to the pregnancy-parenthood experience occurred before birth rather than afterwards. Differences after birth may have been attributable to differences in hospital birth experiences. These, if they occurred, did not seem to have any differential effect on post-partum emotional reactions. It appears that the experience of parenthood is a fairly common one while the expression or manifestation of emotions before birth is more susceptible to cultural variation.

In general, both positive and negative emotions are experienced by women before and after birth. Acknowledging the negative reactions may be of importance in preventing longer term emotional difficulties from developing in accordance with established psychological theory [11].

The relatively large number of women experiencing negative reactions, particularly to parenthood, is of concern. Childbirth education programmes which do not already do so, could be enhanced by their acknowledgement of such difficulties and their incorporation of preparation for the common emotional and particularly negative reactions experienced by women into their content. Cul-

tural differences in reactions to pregnancy and to some extent parenthood would need acknowledgement.

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References

1. Chalmers, B. (1990). *Pregnancy and Parenthood: Heaven or Hell.* Berev Publications, Sandton
2. Grimm, E. R. (1967). *Psychological and social factors in pregnancy, delivery and outcome.* In: Richardson, S. A. and Guttmacher, A. F. (eds.) Childbearing: Its social and psychological aspects. Williams and Wilkins, Baltimore
3. Robin, A. A. (1962). The psychological changes of normal parturition. *Psychiat Q* **36**, 129
4. Chalmers, B. (1991). *Cross cultural aspects of childbirth: Report on a larger research grant.* Submitted to the Institute for Research Development of the Human Sciences Research Council, Johannesburg
5. Rosenthal, L. N. (1976). *Marriage, the family and social change among the Gudjerati speaking Indians of Johannesburg.* Doctoral Dissertation, University of the Witwatersrand, Johannesburg
6. Chalmers, B. (1987). Black women's birth experiences: Changing traditions. *J. Psychosom. Obstet. Gynecol.* **6**, 211–224
7. Ransom, O. J., Chalmers, B., Herman, A., and Reinach, G. (1988). Infant feeding in a Coloured community. *SAMJ* **74**, 393–395
8. Chalmers, B. and Meyer, D. (1990). Adjustment to the early months of parenthood. *Int. J. Prenatal Perinatal Studies* **2**, 229–240
9. Craig, A. P. and Albino, R. C. (1983). Urban Zulu mother's views on the health and health care of their infants. *SAMJ* **63**, 571–572
10. Bracken, M. B. (1989). Reporting observational studies. *Br. J. Obstet. Gynecol.* **86**, 383–388
11. Janis, I. L. (1958). *Psychological Stress.* Wiley, New York