Maternity Satisfaction Studies and Their Limitations: "What Is, Must Still Be Best"

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ABSTRACT: Background: *Health policymakers throughout the developed world are paying close attention to factors in maternity care that may influence women's satisfaction. This paper examines some of these factors in the light of observations from previous studies of satisfaction with health services.* **Methods:** *The Scottish Birth Study, a cross-sectional questionnaire survey, sought the views of all women in Scotland delivering during a 10-day period in 1998. A total of 1,137 women completed and returned questionnaires (response rate = 69%).* **Results:** *Women were overwhelmingly satisfied with their prenatal, intrapartum, and postnatal care. As is common in this type of study, reports of dissatisfaction were relatively low. However, differences occurred in satisfaction levels between subgroups; for example, the fewer the number of caregivers the woman had during childbirth, the more likely she was to be satisfied with the care received. A range of factors appeared to influence reported satisfaction levels, such as characteristics of the care provided and the woman's psychosocial circumstances.* **Conclusions:** *In addition to the inherent limitations of satisfaction studies found in the literature, problems may arise if such surveys are used uncritically to shape the future provision of maternity services, because service users tend to value the status quo over innovations of which they have no experience. Therefore, although satisfaction surveys have a role to play, we argue that they should only be used with caution, and preferably as part of an array of tools. (BIRTH 30:2 June 2003)*

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Health policymakers worldwide are paying close attention to those factors in maternity care that influence women's satisfaction (1–8). It has been recommended that services should become more woman centered, and that women should be involved in the planning of maternity services (2–6). In the United Kingdom these recommendations have reflected the movement toward a greater involvement of service users throughout the health services (9), and have led some to comment that "practitioners will be required to alter not just their methods of delivery but their whole philosophy of care" (10, p 46).

Maternity services in the United Kingdom have responded to calls for greater user involvement, and all countries have introduced policies and midwife-led initiatives designed to support the development of woman-centered maternity services. The principles of such services are that, first, women are encouraged to

participate in decisions about their care; and second, service providers should attempt to involve women in the planning of the service. However, this is not as straightforward as it seems. Involving women in determining the important components of a service requires a structured and thorough assessment of women's needs. This assessment is often carried out through an audit of the service, and the measurement of satisfaction with care has become a popular and recommended component of such surveys (11–12). However, the processes involved when women make choices about their care are complex, and as a result, satisfaction surveys may be misleading. This study highlights the problems that may arise if users' viewpoints, as measured by satisfaction studies, are used as the primary factor in shaping the provision of maternity services.

The Scottish Birth Study

A survey of women's views of their care was undertaken as part of a national audit of maternity services in Scotland (13–14). The overall aim was to determine the extent to which the 28 recommendations from national policy documents (4,15) had been adopted in practice.

A large amount of the data required to answer questions about these recommendations had to be collected directly from the Scottish women; therefore, it was not possible to include detailed questions about women's preferences (13). Instead, we assessed women's satisfaction with the different elements of their maternity care, although we recognized that problems could be associated with using satisfaction as an outcome measure. One of the primary problems is that the theoretical basis of many satisfaction studies is simplistic (16), or lacking (17–20). The problem of defining satisfaction was raised in the 1970s (21), but despite considerable work in this area, little consensus remains about the definition of the concept (22). It is generally agreed that satisfaction is a multidimensional concept determined by a variety of factors (23). Factors may include the realities of events or care that the patient receives, personal preferences, values, and expectations (24,25). In maternity care a range of factors can influence the high levels of maternal satisfaction (8,16,19,26–42):

- Respondents' previous experience of care, e.g., parity or having undergone fewer obstetrical/medical interventions
- Continuity of care/caregiver
- Availability of social support, e.g., having a permanent partner
- Immediate contact between the baby and the mother
- Length of stay in hospital and/or early discharge
- Age of respondents
- Involvement in prenatal classes
- Choice about place of prenatal care/delivery, type of care, positions in labor, etc.
- Expectations, that is, having realistic expectations of the birth
- The woman feeling in control/involvement in decision-making
- Quality of the relations and communication between women and staff
- Timing of research
- The wording, order and/or presentation of questions.

Various models of satisfaction have been proposed, but it is argued that they have done little to explain the process by which patients assess care (23). It has been suggested that patients rarely evaluate care in terms of satisfaction (43), and indeed, studies of women's childbirth experience demonstrate that women have difficulty verbalizing what they mean by it (16).

Despite the high levels of satisfaction and the difficulty in defining what is meant by satisfaction, one might still find a difference between groups of women receiving different levels of care in a well-controlled intervention study. Thus, the Cochrane Review on *Continuity of Caregivers for Care During Pregnancy and Childbirth* reported that "compared to usual care, women who had continuity of care from a team of midwives … were more likely to be pleased with their prenatal, intrapartum, and postnatal care" (44). However, high levels of satisfaction cast doubt on the ability of such surveys to detect real differences in patients' opinions (19). One explanation for high satisfaction levels is that in the National Health Service, a publicly funded service, users might be reluctant to express critical comments about their care (45), so-called "gratitude bias" (46). One could argue that reluctance to criticize existing facilities is a particular problem in Scotland, since many small maternity units have been closed over the past two decades, thus limiting choice about future maternity care (47). With policy documents suggesting that existing units "serving a small population might become less viable" and be closed down (48), women might feel that criticizing their local maternity unit might lead to its closure.

However, it could also be argued that due to the lack of choice, expectations can be low and women may report higher satisfaction because of this. It is

difficult to express a preference for something else if a woman does not know what services are, or could be made, available. Equally, how can she express dissatisfaction with the current service if she does not know the alternative options? This means that satisfaction studies are unlikely to direct service providers and health policymakers toward a policy that suggests innovative changes to a service, but instead, may actually encourage them to support the status quo.

We tried to overcome some of these limitations by including questions relating to satisfaction with specific areas of maternity care provision (13), since this has been shown to be an important consideration in eliciting satisfaction (7,16). The aim was to identify individual or specific concerns, thus avoiding the problem of using a single measure of overall satisfaction (16). Given the volume of data to be collected, it was not possible to include open-ended questions for each area of care, although previous research suggests that this may be important in detecting underlying dissatisfaction with care (7,49–50).

Methods

A cross-sectional survey was used to seek the views of all women delivering in Scotland during a 10-day period in September 1998. All women who gave birth within this period were eligible to participate in the study. *A priori* exclusions included women who were unable to complete the questionnaire in the English language; women for whom the midwife deemed it inappropriate, each case being assessed individually; and women who no longer resided in Scotland on their 10th postnatal day. Retrospective analysis of data from the Registrar General's Office showed that there were 1,659 births, including 10 stillbirths, in Scotland during the study period.

The questionnaire, developed by the research team, focused on 28 audit criteria in four principle themes: equipping women to make informed choices about their care; the roles of different professional groups; providing a choice of type of intrapartum care; and providing continuity of care and caregiver. It was developed using existing, validated questionnaires (12,51–54), and most of the questions were closed, although a section for open comments was included at the end. The questionnaire, which was piloted in 5 Scottish hospitals using different methods of distribution (55), was found to be easy to complete and acceptable to women.

Ethical approval was sought. Midwives distributed questionnaires to the women on the 10th postnatal day, and midwives were asked to exclude only those women for whom they deemed the questionnaire inappropriate. A total of 20 women were excluded for reasons such as stillbirth or death of their baby. Return of the questionnaire was direct to the research team in an attempt to overcome "gratitude bias," that is, with women giving responses that they thought were more acceptable to the midwives (56). A total of 1,137 completed questionnaires were returned (response rate 69%).

Table 1. Demographic Characteristics of Women in the Scottish Births Survey*

Characteristic	*No.*	*(%)*
Age group (yr) ($n = 1113$)		
15–19	82	(7.4)
20–24	156	(14.0)
25–29	347	(31.2)
30–34	367	(33.0)
35–39	147	(13.2)
40–44	14	(1.3)
This birth was: ($n = 1136$)		
One baby	1126	(99.1)
Twins	10	(0.9)
Triplets or more	–	–
Previous children ($n = 1122$)		
None (this was first baby)	509	(45.4)
One	408	(36.4)
Two	142	(12.7)
Three or more	63	(5.6)
Ethnic group ($n = 1092$)		
White	1072	(98.2)
Black (British, Caribbean, African, other)	–	–
Indian	2	(0.2)
Pakistani	7	(0.6)
Bangladeshi	–	–
Chinese	4	(0.4)
Other	7	(0.6)
Who the woman lives with ($n = 1120$)		
Husband/partner	996	(88.9)
Mother and/or father	81	(7.2)
Other children	593	(52.9)
Siblings	31	(2.8)
Other	15	(1.3)
Deprivation score ($n = 1006$)†		
1 (affluent)	64	(6.4)
2	126	(12.5)
3	242	(24.1)
4	263	(26.1)
5	155	(15.4)
6	102	(10.1)
7	54	(5.4)

* *Table 1 is reproduced with permission of Blackwell Publishers, Inc.; the table was originally published in Hundley et al (13).*

† *The deprivation score is a measure of poverty, and is composed of four indicators, which represent material disadvantage in the population in a ZIP code area: (1) overcrowding; (2) male unemployment; (3) proportion of people in lowest social classes; and (4) proportion of households without a car.*

Data were analyzed using the statistical package SPSS (57). Where numbers were insufficient for analysis, for example in the dissatisfaction categories, these were amalgamated. The chi-square test was used to compare differences in proportions.

Results

The demographic characteristics of study participants (Table 1) were comparable with national statistics on maternal age, parity, and deprivation (14).

Factors Affecting Satisfaction

Women were asked how satisfied they were with the care they received during the prenatal, intrapartum, and postnatal periods. Table 2 shows the reported level of satisfaction for each of these periods. Approximately 80 percent of women were satisfied at all three phases of care provision. Women were least satisfied with intrapartum care, although reports of dissatisfaction were relatively low.

No statistically significant differences occurred in the satisfaction of first-time mothers and mothers with previous children with their prenatal and intrapartum care, but the two groups showed a difference in satisfaction with postnatal care (Table 2). In addition, women who had one or two caregivers during their pregnancy were significantly less likely to be dissatisfied than women who experienced many caregivers (Table 2). Thus the fewer the number of caregivers, the more likely women were satisfied with their care. Although having previously met the delivery midwife resulted in slightly more women being very satisfied, this difference was not statistically significant.

Factors Affecting the Value that Women Place on Aspects of Care

Most women believed that it was important to have one primary person who was responsible for providing their prenatal care (88%). Sixty-six percent of women ($n = 64$) reported that they did have one primary person. Subanalysis revealed that these women had substantially different views about its importance compared with women who had not experienced care from a primary person (Table 3).

Table 2. Women's Satisfaction with Maternity Care in Scotland, 1998

	Degree of Satisfaction						
	Very Satisfied		*Satisfied in Some Ways, But Not Others*		*Dissatisfied**		
Satisfaction and Experience	*No.*	*(%)*	*No.*	*(%)*	*No.*	*(%)*	*Significance*
Satisfaction with maternity care†							
Prenatal ($n = 1091$)	845	(77)	238	(22)	8	(1)	na
Delivery/birth ($n = 1090$)	870	(80)	186	(17)	34	(3)	
Postnatal ($n = 1084$)	881	(81)	182	(17)	21	(2)	
Effect of experience on satisfaction							
Prenatal period							
First baby ($n = 486$)	375	(77)	106	(22)	5	(1)	$\chi^2 = 0.992$, *df* 2,
Second or subsequent baby ($n = 591$)	457	(77)	131	(22)	3	(1)	$p = 0.609$
Delivery/birth period							
First baby (n = 485)	380	(78)	86	(18)	9	(4)	$\chi^2 = 1.940$, *df* 2,
Second or subsequent baby ($n = 591$)	477	(81)	99	(17)	5	(2)	$p = 0.379$
Postnatal period							
First baby ($n = 482$)	375	(78)	96	(20)	11	(2)	$\chi^2 = 7.112$, *df* 2,
Second or subsequent baby ($n = 588$)	495	(84)	83	(14)	10	(2)	$p = 0.029$
Effect of having fewer caregivers throughout pregnancy							
1 or 2 people ($n = 717$)	572	(80)	139	(19)	6	(1)	$\chi^2 = 298.8$, *df* 2,
Different people each time ($n = 328$)	88	(27)	183	(56)	57	(17)	$p < 0.001$
Effect of being cared for in labor by a midwife met in pregnancy							
Women who experienced this ($n = 121$)	84	(69)	33	(27)	4	(3)	$\chi^2 = 3.239$, *df* 2,
Women who did not ($n = 902$)	559	(62)	286	(32)	57	(6)	$p = 0.198$

* *Combines two categories "Slightly dissatisfied" and "Very dissatisfied" due to small numbers.*
† *The 3 questions were: Thinking about your antenatal care, how satisfied were you with the care you received? (tick one box only); Thinking about your labor and delivery, etc.; Thinking about your postnatal care, etc. na = not applicable.*

Nearly two-thirds of women who had one person responsible for providing prenatal care rated this as very important, whereas only one-fourth of women who had not experienced this thought it to be important.

A similar picture was found in relation to continuity of caregiver, with most women (65%) who had met the midwife during pregnancy rating it as very important (Table 3). However, it was regarded as not important by 52 percent of the women who had not previously met the midwife attending them in labor. The difference between these two groups was statistically significant and cannot be explained by differences in demographic characteristics, such as mean age, parity, whether or not they lived with a husband/partner, and their socioeconomic class.

The maternity unit's policy also had a significant effect on the value that women placed on some aspects of care (Table 3). Women who were cared for in units with a policy that allowed them to record their birth plan directly in the maternity records were significantly more likely to think that having a written birth plan was important. However, this effect was not seen with respect to the homeliness of a unit. The reason for this is that few women did not rate homeliness of the unit as *unimportant*. One explanation for this result is that every woman has previous experience of a homely environment (i.e., her own home), but not every woman has the equivalent experience of a written birth plan or having one primary person with overall responsibility for her care.

Discussion

Nearly two decades have passed since Porter and Macintyre published "What is, must be best" (58, p 1197), in which they remarked that:

> Women tend to assume that whatever system of care is provided has been well thought out and is therefore likely to be the best one. Where they express a preference, it is generally for whatever arrangements they have experienced rather than for other possible arrangements.

The authors, reporting on a range of innovations in the organization of maternity care in Aberdeen, Scotland, in the early 1980s, found that those who had not experienced the innovation were considerably more negative about it than those who had (58). Our study suggests that little has changed. The question is whether this matters.

Women in our survey reported that they were very satisfied with the care received in all three areas of maternity care—prenatal, intrapartum, and postpartum care. This is in line with previous studies, which demonstrated high levels of satisfaction with health care (7,53,56,59–61). One of the reasons that respondents tend to answer positively to questions about satisfaction is a reluctance to criticize their caregivers (61), and this problem may have been compounded by our study design. Although women returned the questionnaire directly to the researchers, it is possible that the involvement of health professionals in data collection may have resulted in socially desirable responses or an "ingratiating response bias" (25,59,60).

Table 3. Effect of Experience on Women's Perceptions of Importance of an Aspect of Care

	Degree of Importance						
	Very Important		*Quite Important*		*Not Important*		
Importance of Experience	*No.*	*(%)*	*No.*	*(%)*	*No.*	*(%)*	*Significance*
Importance of having one primary person with overall responsibility for care							
Women who experienced this ($n = 693$)	443	(64)	233	(34)	17	(2)	$\chi^2 = 223.25$, *df* 2,
Women who did not ($n = 352$)	89	(25)	160	(46)	103	(29)	$p < 0.001$
Importance of being cared for in labor by a midwife met during pregnancy							
Women who experienced this ($n = 134$)	87	(65)	37	(28)	119	(7)	$\chi^2 = 188.03$, *df* 2,
Women who did not ($n = 974$)	148	(15)	324	(33)	286	(52)	$p < 0.001$
Importance of having a written birth plan							
Women in units with a policy allowing plan to be written in case notes ($n = 380$)	122	(32)	139	(37)	119	(31)	$\chi^2 = 11.64$, *df* 2,
Women in units without a policy ($n = 691$)	174	(25)	231	(33)	286	(41)	$p = 0.003$
Importance of having a homely place to deliver							
Women in units with homely settings ($n = 404$)	234	(58)	148	(37)	22	(5)	$\chi^2 = 4.09$, *df* 2,
Women in units without ($n = 724$)	384	(53)	281	(39)	59	(8)	$p = 0.129$

Users' views will inevitably be limited by their experience (58), and there are complex linkages between expectations, preferences, and satisfaction. We hypothesized that women who had just given birth to their first baby would be more likely to be satisfied than women who had a baby before. This hypothesis was based on the belief that the latter group of women would have an experience with which to compare their current care (19,34,37). However, no statistically significant differences were found between first-time mothers and mothers with one or more previous children in any of the time periods.

We found a tendency for women to say they preferred the care they had received, which highlights the need for close attention when carrying out satisfaction surveys with a view to planning the maternity services. Hypothetical questions in which respondents are asked to give their probable response to new experiences or care arrangements may considerably underestimate the extent to which the actual responses will be favorable. In other words, asking women if they would like to be delivered by a "known midwife" may result in an underestimation of a desire for this type of care, if this is not currently available because of a tendency to prefer the status quo (62). Tables 1 and 2 indicate that having experience of something makes it more important in women's eyes and more satisfying to her. What is interesting in the Scottish Birth Study is that significant differences occurred in levels of satisfaction among women receiving different kinds of (prenatal) care. This finding has implications for the design of service delivery, as well as for the design and analysis of satisfaction studies. In terms of research, a discrete choice experiment might be more useful in identifying the level of importance and satisfaction that women place on different aspects of care (63).

Satisfaction can neither be separated from the actual maternity care received nor from the preexisting expectations and preferences. It is important to recognize that people's experiences and preferences are shaped by what they "know." Responses will be affected by what the women believe to be possible, by what they have experienced, and by the quality of care they have come to expect. One concern is that general measures may hide the value that women would place on innovations or new models of care, if these were available, leading to an undervaluing of the innovation. Thus, high levels of reported satisfaction might not be helpful, and the volume of comment may be a more sensitive indicator (64).

The impact of research on the satisfaction of service users is problematic when it comes to applying it to purchase intentions. Not only are there the problems of hypothetical desires for the arrangement of maternity care, but there are also research issues when asking women if they were satisfied with the care they received. For example, the timing of the research may influence the findings (34), since it takes time to adapt to the new family situation and it is only later that women (and their partners) report the less desirable aspects of the maternity care they experienced, with negative feelings about the birth experience being more common 7 to 12 months after birth than in the first 6 months (65,66). Although we conducted a postal maternity satisfaction survey 10 days after the delivery (and after hospital discharge), it may have been too early. However, Bramadat and Driedger argued that timing is perhaps less important than previously suggested, because there is "stability of measures of satisfaction … during the early postpartum period" (16), whereas Hodnett concluded that "There may be no optimum time; it may be dependent on the purpose of the study" (42).

The planning, design, and provision of health services in the United Kingdom is increasingly consumer driven. However, we should not assume that we know what women's needs are from the results of satisfaction surveys. Satisfaction studies do not provide guidance about how limited resources should be allocated (8,16,67). Thus, a satisfaction study reporting dissatisfaction with the hospital food does not reveal how important this issue is in relation to other aspects of care. This characteristic of care with which patients are least satisfied may also be the one with which they are least concerned. Therefore, managers obviously should not use such findings to move resources from, for example, neonatal intensive care to the hospital kitchen. It must also be remembered that satisfaction studies are not the same as public preference studies, and some have questioned whether satisfaction studies should be used in making decisions about allocating resources (63).

Despite the inherent limitations outlined in our paper, satisfaction surveys have a role to play in shaping maternity care policy and its actual organization. However, they should only be used with caution, and preferably as part of an array of tools. Although involving service users is important, using satisfaction surveys alone could actually promote the status quo, because service users tend to value the kind of care they have experienced.

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References

1. Sadler LC, Davidson T, McCowan LME. Maternal satisfaction with active labor: A randomized controlled trial. *Birth* 2001;28:225–235.
2. House of Commons Health Committee. *Second Report of the House of Commons Health Committee on Maternity Services for the session 1991–92*. (HCP29). London: Her Majesty's Stationary Office, 1992.
3. Department of Health. *Changing Childbirth, Part 1*. Report of the Expert Maternity Group. London: Her Majesty's Stationary Office, 1993.
4. Scottish Office Home & Health Department. *Provision of Maternity Services in Scotland: A Policy Review*, Edinburgh: Her Majesty's Stationary Office, 1993.
5. National Health and Medical Research Council. Expert Panel on Options for Effective Care in Childbirth. In: National Health & Medical Research Council, eds. *Options for Effective Care in Childbirth*. Canberra, Australia: AusInfo, 1996.
6. The National Health Committee. *Review of Maternity Services in New Zealand*. Wellington, New Zealand: Author, 1999.
7. Johnson M, Langdon R, Yong L, et al. Comprehensive measurement of maternal satisfaction: The modified Mason Survey. *Int J Nurs Practice* 2002;8:127–136.
8. Brown S, Lumley J. The 1993 Survey of Recent Mothers: Issues in survey design, analysis and influencing policy. *Int J Qual Health Care* 1997;9:265–275.
9. Department of Health. *The Patient's Charter and Maternity Services*, London: Department of Health, 1994.
10. Walton I, Hamilton M. *Midwives and Changing Childbirth*, Hale, United Kingdom: Books for Midwives Press, 1995.
11. Garcia J. *Getting Consumers' Views of Maternity Care*. London: Her Majesty's Stationary Office, 1989.
12. Mason V. *Women's Experience of Maternity Care: A Survey Manual*. London: Her Majesty's Stationary Office, 1989.
13. Hundley V, Rennie AM, Fitzmaurice A, et al. A national survey of women's views of their maternity care. *Midwifery* 2000;16:303–313.
14. Scottish Programme for Clinical Effectiveness in Reproductive Health (SPCERH) and the Dugald Baird Centre for Research on Women's Health. *Maternity Care Matters: An Audit of Maternity Services in Scotland 1998*. SPCERH Publication Number 9. Aberdeen: Author, 1999.
15. Clinical Research & Audit Group (CRAG)/Scottish Health Management Efficiency Group (SCOTMEG) *Working Group on Maternity Services*. Final Report. Edinburgh: Author, 1996.
16. Bramadat IJ, Driedger M. Satisfaction with childbirth: Theories and methods of measurement. *Birth* 1993;20:22–29.
17. Avis M. Incorporating patients' voices in the audit process. *Qual Health Care* 1997;6:86–91.
18. Bisset A, Chesson R. Is this satisfaction survey satisfactory? Some points to consider in their planning and assessment. *Health Bull* 2000;58:45–51.
19. Carr-Hill RA. The measurement of patient satisfaction. *J Public Health Med* 1992;14:236–249.
20. Cleary PD. The increasing importance of patient surveys. *BMJ* 1999;319:720–721.
21. Locker D, Dunt D. Theoretical and methodological issues in sociological studies of consumer satisfaction with medical care. *Soc Sci Med* 1978;12:283–292.
22. Avis M, Bond M, Arthur A. Satisfying solutions? A review of some unresolved issues in the measurement of patient satisfaction. *J Adv Nurs* 1995;22:316–322.
23. Williams B. Patient satisfaction: A valid concept? *Soc Sci Med* 1994;38:509–516.
24. LinderPelz S. Toward a theory of patient satisfaction. *Soc Sci Med*. 1982;16:577–582.
25. Sitzia J, Wood N. Patient satisfaction: A review of issues & concepts. *Soc Sci Med* 1997;45:1829–1843.
26. Bradley CF. Psychological consequences of interventions in the birth process. *Can J Behav Sci* 1983;15:422–438.
27. Charles AG, Norr KL, Block CR, et al. Obstetric and psychological effects of psychoprophylactic preparation for childbirth. *Am J Obstet Gynecol* 1978;131:44–52.
28. Clark AL. Labour and birth expectations and outcomes. *Nurs Forum* 1975;14:413–428.
29. Cohen G, Forbes J, Garraway M. Can different patient satisfaction survey methods yield consistent results? Comparison of three surveys. *BMJ* 1996;313:841–844.
30. Davenport-Slack B, Boylan CH. Psychological correlates of childbirth pain. *Psychosom Med* 1974;36:215–223.
31. Fleming AS, Ruble DN, Anderson V, et al. Place of childbirth influences feelings of satisfaction and control in first-time mothers *J Psychosom Obstet Gynaecol* 1988;8:1–17.
32. Humenick SS. Mastery—the key to childbirth satisfaction? A Review. *Birth Fam J* 1981;8:79–83.
33. Humenick SS, Bugen LD. Mastery—the key to childbirth satisfaction? A Study. *Birth Fam J* 1981;8:84–90.
34. Lebow JL. Consumer assessment of the quality of medical care. *Med Care* 1974;12:328–237.
35. Mercer RT, Hackley KC, Bostrom AG. Relation of psychosocial and perinatal variables to perception of childbirth. *Nurs Res* 1983;32:202–207.
36. Morgan BM. Bulpitt CJ, Clifton P, et al. The consumers' attitudes to obstetric care. *Br J Obstet Gynaecol* 1984;91:624–628.
37. Pelkonen M, Perälä MJ, Vehviläinen-Julkunen K. Participation of expectant mothers in decision making in maternity care: results of a population-based survey. *J Adv Nurs* 1998; 28:21–29.
38. Reid M. What are consumers' views of maternity care? In: Chamberlain G, Patel, N, eds. *The Future of the Maternity Services*. London: Royal College of Obstetricians and Gynaecologists, 1994:3–11.
39. Sosa R, Kennell J, Klaus M, et al. The effect of a supportive companion on perinatal problems, length of labor, and mother-infant interaction. *N Engl J Med* 1980; 303:597–600.
40. Dowsell T, Piercy J, Hirst J, et al. Short postnatal hospital stay: Implications for women and service providers. *J Public Health Med* 1997;19:132–136.
41. McCrea BH, Wright EW. Satisfaction in childbirth and perceptions of personal control in pain relief during labour. *J Adv Nurs* 1999;29:877–884.
42. Hodnett ED. Pain and women's satisfaction with the experience of childbirth: A systematic review. *Am J Obstet Gynecol* 2002;186:S.160–S.172.
43. Staniszewska S, Ahmed L. The concepts of expectation and satisfaction: Do they capture the way patients evaluate their care? *J Adv Nurs* 1999;29:364–372.

44. Hodnett ED. Continuity of caregiver for care during pregnancy and childbirth (Cochrane Review). In: *The Cochrane Library*. Issue 4. Oxford: Update Software, 2001.
45. Fitzpatrick R, Hopkins A. Problems in the conceptual framework of patient satisfaction research. *Sociol Health Illness* 1983;5:297–311.
46. Øvretveit J. *Health Service Quality*. Oxford: Blackwell, 1992.
47. Graham WJ, Hundley V, McCheyne AL, et al. An investigation of women's involvement in the decision to deliver by caesarean section. *Br J Obstet Gynaecol* 1999;106:213–220.
48. Scottish Executive. *A Framework for Maternity Services in Scotland*, Edinburgh: Primary Care Unit, Scottish Executive Health Department, 2001.
49. Michie S, Kidd J. Happy ever after. *Health Service J* 1994;104:27.
50. Sullivan DA, Beeman R. Satisfaction with maternity care: A matter of communication and choice. *Med Care* 1982:20: 321–330.
51. Lamping DL, Rowe P. *Users' Manual for Purchasers and Providers: Survey of Women's Experience of Maternity Services* . London: Health Services Research Unit, London School of Hygiene & Tropical Medicine, 1996.
52. Audit Commission and Institute of Child Health. *Maternity Care Survey*. Bristol: Author, 1996.
53. Hundley V, Milne J, Glazener C, et al. Satisfaction and the three C's—continuity, choice and control: Women's views from a randomised controlled trial of midwife-led care. *Br J Obstet Gynaecol* 1997;104:1273–1280.
54. Rennie AM, Hundley V, Gurney E, et al. Women's priorities for care before and after delivery. *Br J Midwifery* 1998;6: 434–438.
55. van Teijlingen E, Rennie AM, Hundley V, et al. The importance of conducting and reporting pilot studies: The example of the Scottish Births Survey. *J Adv Nurs* 2001;34:289–295.
56. Riley EMD. What do women want? The question of choice in the conduct of labour. In: Chard T, Richards M, eds. *Benefits and Hazards of the New Obstetrics*. London: Spastics International Medical, 1977:62–71.
57. Norusis MJ. *SPSS for Windows. 7.5. Reference Manuals*. Chicago: SPSS Inc., 1997.
58. Porter M, Macintyre S. What is, must be best: A research note on conservative or deferential responses to antenatal care provision. *Soc Sci Med* 1984;19:1197–1200.
59. Lumley J. Assessing satisfaction with childbirth. *Birth* 1985;12:141–145.
60. Jacoby A, Cartwright A. Finding out about the views and experiences of maternity service sers. In: Garcia J, Kilpatrick R, Richards M, eds. *The Politics of Maternity Care*. Oxford: Clarendon, 1990:238–255.
61. Fitzpatrick R. Surveys of patient satisfaction: 1-Important general considerations. *BMJ* 1991;302:887–889.
62. Hundley V. *Determining Success in the Provision of Maternity Care*. Unpublished Doctoral thesis. University of Aberdeen, Aberdeen, 2001.
63. Ryan M, Scott D, Reeves C, et al. Eliciting public preferences for healthcare: A systematic review of techniques. *Health Technol Assess* 2001;5:29–30.
64. Carstairs V. *Channels of Communication (Scottish Health Studies 11)*. Edinburgh: Scottish Home & Health Department, 1970.
65. Erb L, Hill G, Houston D. A survey of parents' attitudes towards their cesarean births in Manitoba Hospitals. *Birth* 1983;10:85–92.
66. Bennett A. The birth of a first child: Do women's reports change over time? *Birth* 1985;12:153–158.
67. Scott A, Smith RD. Keeping the customer satisfied: A technique for adding value to patient satisfaction surveys. *Int J Qual Health Care* 1994;6:353–359.