

# A Comparison of Adolescent and Adult Mothers' Satisfaction With Their Postpartum Nursing Care

Wendy E. Peterson and Alba DiCenso

On a cherché à déterminer, dans cette étude de cohortes en paires appariées, s'il existait une différence entre les mères adolescentes non mariées et les mères adultes mariées relativement au taux de satisfaction à l'égard des soins infirmiers postnatals. Quarante-paires de mères adolescentes et de mères adultes séjournant dans un hôpital d'enseignement de taille moyenne ont été appariées en fonction de la parité, du type d'accouchement, de l'état de santé de l'enfant et de la méthode d'allaitement. Les adolescentes ont attribué un score plus bas que les adultes, tant sur l'échelle *Experiences of Nursing Scale* que sur l'échelle *Satisfaction with Nursing* des *Newcastle Satisfaction with Nursing Scales*. Chez les adolescentes, les mères césariées se sont dites moins satisfaites que les mères qui avaient accouché par la voie vaginale. L'insatisfaction des mères adolescentes à l'égard de la disponibilité des infirmières et de la communication infirmière-cliente est l'une des explications possibles. Les études qualitatives à venir orienteront la mise au point d'interventions destinées à améliorer le taux de satisfaction chez les mères adolescentes.

Mots-clés : mères adolescentes, taux de satisfaction, soins postnatals, soins infirmiers

The purpose of this matched-cohort survey was to determine whether there is a difference between unmarried adolescent mothers and married adult mothers in terms of satisfaction with inpatient postpartum nursing care. Eighty adolescent/adult postpartum mother pairs from a mid-sized teaching hospital were matched according to parity, mode of delivery, infant health status, and infant feeding method. Adolescents scored lower than adults on both the Experiences of Nursing Care Scale and the Satisfaction with Nursing Care Scale of the Newcastle Satisfaction with Nursing Scales. Among the adolescents, post-caesarean mothers were less satisfied than mothers who had delivered vaginally. Adolescent mothers' dissatisfaction with nurse availability and nurse-client communication are possible explanatory factors. Future qualitative studies will inform the design of interventions to improve satisfaction among adolescent mothers.

Keywords: postpartum, nursing care, health services, immigrant, women

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## Literature Review

Recent Canadian statistics indicate that over 17,000 infants are born to adolescent mothers annually (Statistics Canada, 2002). This is a concern because young mothers and their children are at high risk of poor physical, psychosocial, and economic outcomes. For example, when compared with older mothers, adolescent mothers are more likely to deliver low-birthweight infants and to be unmarried, and less likely to be educated and responsive parents (Fraser, Brockert, & Ward, 1995; Parks & Arndt, 1990; Wadhera & Millar, 1997). Their children are more likely to be formula fed, to be hospitalized during the first year, and to have educational disabilities by age 5 (Gueorguieva et al., 2001; Nolan & Goel, 1995; Strobino, Ensminger, Nanda, & Kim, 1992).

Adequate pre- and postnatal care, prenatal classes, and other, more comprehensive, programs are effective in reducing many of the negative outcomes associated with adolescent motherhood (O'Sullivan & Jacobsen, 1992; Timberlake, Fox, Baisch, & Goldberg, 1987). However, adolescent mothers' under-use of these services is well documented (O'Sullivan & Jacobsen; Scholl, Hediger, & Belsky, 1994).

Studies with outpatient adolescents have shown that those who are satisfied with the care they receive are more likely to engage in better self-care and to return for follow-up (Kyngas, Hentinen, & Barlow, 1998; Litt & Cuskey, 1984). Evidence suggests that the health behaviour of obstetrical patients may also be influenced by their satisfaction with care. For example, mothers with inadequate prenatal care are more likely to report poor past health-care experiences and dissatisfaction with health-care providers (Lia-Hoagberg et al., 1990). Conversely, maternal satisfaction with the inpatient breastfeeding experience is an important factor in breastfeeding success (Kuan et al., 1999).

Given the relationship between satisfaction with care and health-care utilization among outpatient adolescents, and given the influence of satisfaction on the health behaviours of obstetrical patients, adolescent mothers' satisfaction with their care is important. This study was designed to measure adolescent mothers' degree of satisfaction, relative to that of adult mothers, with their inpatient postpartum nursing care.

We chose to measure maternal satisfaction with inpatient postpartum nursing care because the inpatient setting allowed us to compare satisfaction among adolescents to that among adults with similar nursing-care needs and resources. Furthermore, the postpartum hospital stay represents an opportunity for nurses to provide highly satisfactory care to virtually all adolescent mothers, including those who have

not received adequate prenatal care. If adolescent mothers are found to be more dissatisfied than adult mothers, consideration can be given to the design and evaluation of interventions to improve satisfaction and, ultimately, health-care utilization and health outcomes.

## **Methods**

### *Design*

The nursing-care needs of postpartum mothers depend on many factors, including birth outcomes and infant feeding choices. Therefore, we used a matched-cohort survey to ensure that the adolescent and adult groups had similar nursing-care needs. Each adolescent was matched with an adult according to parity (primipara/multipara), mode of delivery (vaginal/caesarean), current infant health status (rooming-in/neonatal unit), and feeding method (breastmilk/formula). Mothers who supplemented breastmilk with formula were considered breastfeeders because they were receiving nursing care related to breastfeeding.

### *Sample*

The sample was recruited from a 34-bed postpartum unit in a 400-bed teaching hospital located in a mid-sized multi-ethnic city in Ontario, Canada. The hospital is a publicly funded Catholic institution in which approximately 4,000 babies are delivered annually. The postpartum unit is staffed with a mix of registered nurses and registered practical nurses.

To be included in the study, the adolescent mothers had to be (a) no more than 19 years old, and (b) unmarried, and the adult mothers had to be (a) at least 20 years old, and (b) married. The marital-status criterion was included to reflect the norm for each maternal age group. This distinction is important because nurses have been found to potentially treat mothers differently based on marital status (Ganong & Coleman, 1997). For this reason, we grouped together the less conventional marital situations (unmarried and common-law). The common-law status was assigned if the mother described her marital status as common-law, as opposed to using the legal definition.

For both groups, mothers were excluded from the study if they (a) were not English-speaking, (b) had spent less than 24 hours in the postpartum unit, or (c) were in isolation, or if their infant was (d) still-born, (e) born with anomalies, (f) being placed for adoption, or (g) being investigated by the Children's Aid Society prior to discharge.

The sample size was based on previous use of the patient satisfaction instrument. A difference of at least five points (on a scale of 0–100) between adolescent and adult mothers in mean scores on the Experiences of Nursing Care Scale of the Newcastle Satisfaction with Nursing Scales (NSNS) would indicate a clinically important difference in perceptions of nursing care. The sample size necessary to detect this degree of difference with 80% power is 80 patients per group (Thomas, McColl, Priest, Bond, & Boys, 1996).

### *Measures*

The NSNS is a questionnaire designed to measure patient satisfaction with nursing care during one hospital stay. It addresses nurses' attentiveness, availability, reassurance, openness, professionalism, and knowledge, as well as individual treatment received, information provided, and ward organization and environment. Psychometric testing indicates that the NSNS has good construct validity and test-retest reliability and is capable of detecting differences between groups of patients (Thomas et al., 1996).

The NSNS consists of two scales, a patient demographics section, and two open-ended questions. The Experiences of Nursing Care Scale consists of 26 items that describe aspects of nursing care. Respondents use a seven-point Likert scale to indicate the degree to which each item describes their experience. The Satisfaction with Nursing Care Scale consists of 19 items that describe aspects of nursing care. Respondents use a five-point Likert scale to indicate their degree of satisfaction with each identified aspect of nursing care. Item responses are re-coded and summed, resulting in an Experience Scale score and a Satisfaction Scale score. Scores of 100 indicate that the patient experienced the best possible care (Experience Scale) and is 100% satisfied with the care they received (Satisfaction Scale) (Thomas et al., 1996).

### *Data Collection*

Ethical approval was obtained from the hospital's Research Ethics Board. Notices were posted in each postpartum room stating that mothers could be asked to participate in a survey of patient satisfaction. To maximize the response rate among adolescent mothers, the questionnaires were administered prior to hospital discharge.

Training of interviewers (two) included role-playing and rehearsal of a standard script to introduce the study, give instructions, and respond to requests for clarification. The instructions emphasized that

we were interested in both negative and positive experiences and that patients' individual responses would not be shared with the nursing staff. Patients were not dependent on the interviewers in any way for their care. The NSNS was pilot tested with five adolescent and five adult mothers and minor changes to wording were made.

The interviewer introduced the mothers to the study and obtained their written consent. The interview, which took less than 20 minutes to complete, was conducted as close to the mother's day of discharge as possible. An effort was made to use a private room so that mothers would feel comfortable providing honest opinions about their nursing care. Nurses were not in the same room at any point during any of the interviews.

Once an adolescent mother had consented to participate, all married adult postpartum inpatients were identified from the patient census in an effort to find a match. If more than one adult mother was eligible, a mother was randomly selected. If there were no eligible adult mothers, one was selected as soon as possible after the adolescent's interview. The same method of data collection was followed for adult mothers.

### *Data Analysis*

Descriptive baseline data were compared using independent *t* tests (two-tailed) for continuous data and chi-squared or Fisher's exact test (two-tailed) for nominal data. Independent *t* tests were used to determine whether the Experience and Satisfaction scores differed between the adolescent and adult groups. Although our score distributions for both scales were slightly negatively skewed, the sample size was sufficient ( $n = 80/\text{group}$ ) to support the use of parametric tests (Norman & Streiner, 2000).

A linear regression model was used to determine whether baseline variables that differed between groups explained the difference in satisfaction scores. The variables entered into this model were: involvement of an obstetrician, attendance at pre-registration visit, attendance at hospital tour, and patient perception of maternal and infant health. Finally, based on the adolescent-mother data only and a cutoff score of 70 ( $< 70$  indicating dissatisfaction and  $\geq 70$  indicating satisfaction), logistic regression was used to determine whether specific variables explained the difference in adolescents' satisfaction scores. The variables entered in this model were: mode of delivery, education, involvement of an obstetrician, attendance at the pre-registration visit, attendance at the hospital tour, parity, and method of infant feeding.



Variables	Adolescents <i>n</i> = 80	Adults <i>n</i> = 80	<i>p</i> value
Age (years) mean ( <i>SD</i> )	17.4 (1.3) range: 15–19	29.0 (3.8) range: 22–39	
Education			
≤ High school	76 (95%)	17 (21%)	< 0.0001
> High school	4 (5%)	63 (79%)	
≥ 1 Prenatal care visit	78 (98%)	80 (100%)	= 0.25
Prenatal care provider*			
Obstetrician	60 (75%)	72 (90%)	= 0.01
Family physician	53 (66%)	54 (68%)	= 0.87
Midwife	3 (4%)	2 (3%)	= 0.32
Attendance at ≥ 1 prenatal class	41 (51%)	49 (61%)	= 0.20
Hospital pre-registration visit	55 (69%)	76 (95%)	< 0.0001
Hospital tour	42 (53%)	65 (81%)	< 0.0001

\* Totals will be greater than 100% because some women saw two types of prenatal care provider.

Scale	Adolescents Mean ( <i>SD</i> ) <i>n</i> = 80	Adults Mean ( <i>SD</i> ) <i>n</i> = 80	Difference and 95% CI Around Difference	<i>p</i> value
Experience Scale*	73.4 (15.6)	79.2 (12.9)	-5.8 (-10.3, -1.4)	0.01
Satisfaction Scale*	71.2 (20.6)	77.5 (18.0)	-6.3 (-12.3, -0.2)	0.04

\* Range = 0–100 (with 0 signifying a poor score and 100 an excellent score).

## Results

### *Sample*

Recruitment was ongoing until 80 matched pairs were identified. In total, 198 mothers were invited to participate. Four adolescent and five adult mothers declined because they had visitors or were feeling unwell or tired. A total of 189 mothers agreed to participate, resulting in a 95% response rate.

Of the 189 questionnaires, 29 were excluded from the final analysis because there was no match ( $n = 17$ ), the matched adolescent and adult

were interviewed more than 2 months apart ( $n = 8$ ), or there had been an error in eligibility ( $n = 4$ ).

The mean number of days between the adolescent and matched adult interviews was 13.4 days (*range* = 0–62 days). Fifty-one percent of the pairs were interviewed within 7 days of each other. In six cases, the adult mother was interviewed prior to the adolescent mother. The majority (88%) of mothers were interviewed in a private room.

### *Comparison of Baseline Data*

Baseline data for the two groups of mothers are shown in Table 1. The majority of pairs were primiparas (90%) who had delivered vaginally (86%) and were breastfeeding (78%) their healthy newborn infant (95%). A minority of the breastfeeding mothers were supplementing their breastmilk with formula (11% of adolescents; 8% of adults). Fifteen adolescents (19%) described themselves as being in a common-law relationship.

Predictably, the adolescent mothers had significantly less education than the adult mothers ( $p < 0.0001$ ). Adolescents were also less likely to have seen an obstetrician ( $p = 0.01$ ) or to have attended the hospital pre-registration visit ( $p < 0.0001$ ) or the tour ( $p < 0.0001$ ).

At the time of the survey, the adolescent and adult groups had spent a similar number of hours on the unit (52.1 and 51.9;  $p = 0.97$ ). However, the adolescents rated their own health ( $p = 0.03$ ) and their infant's health ( $p = 0.01$ ) higher than the adults.

### *Comparison of Scale Scores*

Table 2 presents a comparison of scores for the two groups of mothers. Adolescent mothers scored lower than adult mothers on both the Experience Scale and the Satisfaction Scale. The linear regression ( $n = 160$ ) indicated that baseline differences between groups (involvement of an obstetrician, attendance at the pre-registration visit or the hospital tour, patient perception of maternal or infant health) did not explain the difference in satisfaction scores.

### *Predicting Dissatisfaction Among Adolescent Mothers*

Mode of delivery was the one variable found to be significantly associated with dissatisfaction. Adolescent mothers who had delivered by caesarean were more likely than those who had delivered vaginally to

be dissatisfied with inpatient postpartum nursing care (Experience Scale: 59.9 vs. 75.5;  $p = 0.03$ ; 95% CI around difference of -15.6: -29.0, -2.2; Satisfaction Scale: 56.6 vs. 73.5,  $p = 0.05$ ; 95% CI around difference of -16.9: -33.5, -0.4).

## Discussion

Our results provide evidence that unmarried adolescent mothers are less satisfied with their inpatient postpartum nursing care than married adult mothers. The matched design contributes to the strength of this finding, in that we can be reasonably assured that adolescent/adult mother pairs required similar nursing care. However, the matched design also caused some delays in the recruitment of mother pairs. Nevertheless, given that the mean time between paired interviews was less than 2 weeks, it is unlikely that differences in scores were due to changes in unit policy or practices.

Our use of the NSNS overcomes two common limitations of satisfaction surveys. First, items for the instrument were generated by asking patients, rather than health-care providers or researchers, to identify important aspects of care. Second, the psychometric properties of the instrument have been established (Thomas et al., 1996). A limitation of using the NSNS is that it was developed and originally tested with medical-surgical patients, who are likely to be older and less healthy than postpartum patients. However, recent psychometric testing indicates that the NSNS is a valid instrument for measuring satisfaction among postpartum inpatients (Peterson & DiCenso, 2001).

Our findings are consistent with evidence from two less conclusive studies. In a sub-analysis of their data, Sullivan and Beeman (1981) found that mothers from low socio-economic backgrounds, teenagers, and multiparas were less satisfied with postpartum care than other mothers. More recently, Lena et al. (1993) found that 59% of adolescents felt uncomfortable sharing a postpartum room with older women, and 33% did not receive information regarding contraception, compared with 11% of adults.

Although we should be cautious about drawing conclusions from the analysis of individual item scores, the data allow us to hypothesize which aspects of postpartum nursing care are most unsatisfactory from the point of view of adolescent mothers. The scale items that were most often scored negatively by the adolescent mothers were those addressing the availability of nurses. Adolescent mothers' responses to an open-ended question supported this finding, with descriptions of



waiting for long periods after calling for assistance and comments that nurses should check on mothers more frequently. Also, many of the instances of unsatisfactory care described by the adolescents can be attributed to poor communication between adolescent mothers and nurses (e.g., lack of understanding regarding the infant's health or the rationale for taking the infant to the nursery).

Among the adolescent mothers, those who had had a caesarean section were the most dissatisfied with their nursing care. Perhaps dissatisfaction with nurse availability and nurse-client communication is intensified when mothers are recovering from a surgical delivery. Post-operative pain and immobility are possible explanatory variables.

The purpose of this study was limited to determining whether adolescent and adult mothers differ in terms of their satisfaction with nursing care. Future research should address the underlying reasons for the disparity in satisfaction. Is the difference in perception of care attributable to differences in patient characteristics (e.g., education, socio-economic status, social support, marital status, expectations), or is it attributable to differences in the manner in which nurses provide care, based on those characteristics?

### **Conclusions and Nursing Implications**

We found that unmarried adolescent mothers are less satisfied with inpatient postpartum nursing care than married adult mothers. Furthermore, we found that post-caesarean adolescent mothers are a sub-group at particularly high risk of being dissatisfied. Further research is required in order to explore the sources of dissatisfaction among adolescent mothers. However, we hypothesize that the low availability of nurses and inadequate communication between nurses and adolescent mothers are important factors.

Implications for postpartum nursing practice include the need for increased sensitivity to the special needs of newly delivered adolescent mothers. Improvements could be made in the frequency of rounds to check on young mothers, in the quality of communications skills among nurses, and in the consistency of nursing assignments. Nurse managers should be alerted to the potential need for increased staffing when adolescent mothers are admitted, to allow nurses time to provide satisfactory care.

We are currently conducting a phenomenological study to further explore the quality of postpartum nursing care from the perspective of adolescent mothers. Future qualitative inquiry into adolescent mothers'

satisfaction with care by other health-care providers, and how their satisfaction changes over time, will also inform the design of interventions to improve health-care satisfaction among adolescent mothers.

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