

# Labor Support: Nurses' Self-Efficacy and Views About Factors Influencing Implementation

Barbara L. Davies, RN, PhD, Ellen Hodnett, RN, PhD

**Objective:** To develop and evaluate a questionnaire assessing nurses' self-efficacy for labor support and to describe nurses' perceptions of factors assisting and preventing the provision of labor support.

**Design:** Two surveys completed by participants.

**Setting:** Five Canadian hospitals.

**Participants:** For Phase 1, 81% (55/68) of maternity nurses at one hospital participated; for Phase 2, 88% (152/173) of labor and delivery (L&D) nurses at four hospitals participated.

**Main Outcomes:** Phase 1, psychometric properties of a new scale; Phase 2, nurses' self-efficacy for labor support and content analysis of nurses' comments.

**Results:** Phase 1: The Cronbach's alpha coefficient of the self-efficacy scale was .98, with a test-retest correlation of  $r_s = .93$ . Higher (more positive) self-efficacy scores were found for L&D nurses compared with postpartum nurses,  $p < .0001$ . Phase 2: Mean self-efficacy scores for L&D nurses were high (range 86.9 to 92.1 out of 98). Written comments ( $n = 304$ ) about the influencing factors in each work setting were coded into the following categories: staffing, physical environment, teamwork, management support, and negative staff attitudes.

**Conclusions:** Phase 1 provided beginning evidence of the reliability and validity of the Self-Efficacy Labor Support Scale. Phase 2 found that L&D nurses' self-efficacy or confidence to provide labor support was high. Adequate staffing was identified as the priority factor. Therefore, it is recommended that attention be focused on implementation factors. In addition, attention to organizational factors is vital if nurses are the professional group that will provide the

evidence-based practice of continuous support for women in labor. *JOGNN*, 31, 00-00; 2002.

**Keywords:** Clinical practice guidelines—Evidence-based practice—Instrument development—Intrapartum nursing care—Knowledge utilization—Labor support research transfer—Self-efficacy

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What are maternity care nurses' views about their experience and ability to provide labor support? To answer this question, a scale was developed to measure nurses' self-efficacy or confidence about providing labor support. Subsequently, the views of practicing labor and delivery nurses were elicited in a survey. The purpose of these two studies was to better understand caregivers' perspectives for the implementation of clinical practice guideline recommendations.

## The Practice-Based Problem

In 1995, the Society of Obstetricians and Gynaecologists of Canada published an evidence-based policy statement, *Fetal Health Surveillance in Labour*. Its first recommendation was that women in active labor should receive continuous, close support from an appropriately trained health care professional. Continuous support includes caregiver presence (80% to 90% of the time), encouragement, and a comforting touch. A number of subsequent reports have acknowledged the importance of continuous support by caregivers for women in labor (Association of Women's Health, Obstetric and

Neonatal Nurses, 2000; Enkin et al., 2000; World Health Organization, 1996).

Evidence substantiating the benefits of continuous professional labor support is included in the Cochrane Library. An ongoing international database of systematic reviews, the Cochrane Library uses well-defined methods to find, appraise, and analyze the results from published and unpublished studies. The Cochrane Collaboration and its use for perinatal nursing are described by Callister and Hobbins-Garbett (2000). The systematic review titled "caregiver support for women during childbirth" includes 14 relevant clinical trials and found substantial benefits with no apparent risks (Hodnett, 2000). Women who receive continuous support in labor from caregivers have significantly fewer caesarean deliveries, and there are decreases in rates of operative vaginal delivery (forceps, vacuum), use of medication for pain relief, and number of infants with low Apgar scores and increased patient satisfaction (Hodnett, 2000).

A gap exists between clinical practice recommendations about labor support and actual clinical practice. In North American hospitals, nurses provide most of the ongoing care to women in labor. Clinical practice guidelines indicate that women should receive support from a caregiver during most of the time they are in active labor. Observational studies, however, have reported that intrapartum nurses spend most of their time outside of the patient's room in activities such as preparing medications, updating charts, giving reports, and communicating with other health professionals and actually spend only 6% to 10% of their time in labor-support activities (Gagnon & Waghorn, 1996; McNiven, Hodnett, & O'Brien-Pallas, 1992).

The transfer of research results into clinical practice is a complex process because it often involves changes in behaviors. Successful interventions to achieve behavioral change have been developed based on social cognitive theory (Bandura, 1997). The central component of the theory is perceived self-efficacy, defined as "people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances" (Bandura, 1986, p. 391). The theory addresses the dynamic relationships between individuals, their environment, and their behavior. An individual's sources of self-efficacy information include personal experience, others used as models, verbal persuasion, and an awareness of personal physiologic state. Judgments of self-efficacy are thought to determine how much effort people expend in the face of obstacles and have predicted behavioral change in a variety of contexts.

The first step in applying social cognitive theory to the study of behavioral change for the evidence-based practice of labor support was to find a tool to measure nurses' self-efficacy for labor support. A review of the literature failed to locate such a tool, and thus the first objective of

the current study (Phase 1) was to develop a tool and evaluate its content validity, construct validity, internal consistency, and test-retest reliability. Second, because the environment is a key interactive component in the theory, it was necessary to identify factors that both assist and prevent nurses in providing labor support in their daily clinical practice. Phase 2, therefore, involved both the assessment of nurses' self-efficacy about labor support and the description of nurses' views about factors influencing implementation.

## Literature Review and Conceptual Framework

The concept of labor support is based on the social support literature and includes three elements: emotional support (presence, encouragement, reassurance), tangible assistance (physical comfort), and advice and information. Concern about the quantity and quality of labor support is not a new issue. In 1956, the presence of American nurses with women in labor was described as "erratic" and more varied than the performance of tasks (Lesser & Keane, 1956, p. 114). An American ethnographic

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study reported that although a variety of drug options, nursing staff protocols, and monitoring and assessment techniques existed, patients usually were not presented with these possible treatment choices (Danziger, 1979). An observational study comparing husband/father and nurse support during labor found that American fathers were significantly more likely to talk, touch, and comfort their wives than were nurses (Klein, Gist, Nicholson, & Standley, 1981). The father was in the labor room for 98% of the time-sampled observations, whereas the nurse was in the room for 32% (Klein et al., 1981). In Belgium and France, midwives felt "depreciated" when providing continuous support, although 80% of midwives thought that this method of care was of benefit and the satisfaction of the mothers was increased (Bréart, Garel, and Mlika-Cabanne, 1992).

Labor support is highly valued by women. In a sample of 80 postpartum women, labor support was identified as the most helpful nursing measure by 45 women (56%), compared with physical care (8%), medications (8%), a combination of categories (13%), and nothing (16%)

(Shields, 1978). In another study of 61 postpartum women, 90% of the participants evaluated their nurses favorably for care during labor for the following reasons: positive participation (80%), acceptance (77%), information giving (75%), encouragement (65%), presence (53%), and competence (7%) (Mackey & Flanders Stepan, 1994). After giving birth, women ranked the top 2 specific nursing support behaviors in a list of 25 as “made me feel cared about as an individual” and “appeared calm and confident giving care” (Bryanton, Fraser-Davey, & Sullivan, 1994; Corbett & Callister, 2000). Other descriptive studies have reported that supportive care by nurses was a factor influencing women’s satisfaction and coping during labor (Callister, 1993; Field, 1987; Lavender, Walkinshaw, & Walton, 1999; Simkin, 1991; Tarkka & Paunonen, 1996). Women with high long-term satisfaction reported that they had felt well-supported by nurses, and their memories of the experience, 15 to 20 years later, were still vivid and deeply felt (Simkin, 1991).

Educational interventions have resulted in significantly increased student and health care provider self-efficacy. The self-efficacy behaviors were diverse and included community-based family nursing, communication with cancer patients, pharmacology, cholesterol screening, and counseling (Ford-Gilboe, Laschinger, Laforet-Fliesser, Ward-Griffin, & Foran, 1997; Gans et al., 1993; Jack et al., 1991; Laschinger, McWilliam, & Weston, 1999; Murdock & Neafsey, 1995; Parle, Maguire, & Heaven, 1997; Pololi & Potter, 1996).

In summary, there is evidence that labor support is a vital aspect of maternity care with important health benefits for mothers and infants and that women value such support from nurses. Social cognitive theory offers a potentially useful framework for the development of interventions to increase the proportion of time that nurses provide labor support. Nurses’ self-efficacy for labor support is a central concept to address concerning the adoption of evidence-based clinical guidelines.

### Phase 1: Development and Evaluation of the Self-Efficacy Questionnaire

A 14-item self-efficacy scale was developed (see Table 1). Items on the scale were from a perinatal nursing efficacy scale (Murphy & Kraft, 1993), a review of the literature, and the observation tools used in previous research (Gagnon & Waghorn, 1996; McNiven et al., 1992). A 7-point Likert-type scale anchored by *strongly disagree* and *strongly agree* was used.

Study protocols received ethics approval from university and hospital review committees. The content validity of the tool was judged by an expert panel of three obstetric nurses and one midwife. Panel members were mailed a structured evaluation form with operational definitions

**TABLE 1**  
*Self-Efficacy Labor Support Scale Items*

How confident are you in your ability to use each of the following techniques for providing support to women in labor?

1. Review and discuss a woman’s preferences (birth plans)
2. Suggest alternate positions/movements
3. Provide specific backache relief measures
4. Know what to say and do for reassurance
5. Be continually present with a woman in labor
6. Assist partner/friend in providing labor support
7. Assist with breathing/relaxation techniques
8. Explain what is happening about labor progress
9. Deal with distress and panic situations
10. Use nonpharmacologic pain relief methods
11. Accept a woman’s behavior without judgment, even when unusual/upsetting

Please rate your skill in the following labor support techniques.

12. Physical comfort measures (backache relief measures, nonpharmacologic pain relief)
13. Emotional support (presence, coping mechanisms for distress and panic situations)
14. Information/advice (labor progress)

and requested to rate the relevance of items and to identify areas of omission and suggestions for change (Lynn, 1986). Of the 13 concept groupings, 11 (85%) received a rating of 3 or 4 on the 4-point scale from at least three of the four reviewers. Minor editorial revisions were made.

The new questionnaire was pretested to determine if it would be comprehensible to labor and delivery nurses and to assess the internal consistency, test-retest reliability, and construct validity. A “known groups” approach was used to assess the construct validity of the questionnaire to determine if the results would differ in the expected direction of the theoretical meanings of the measures (Frank-Stromborg & Olsen, 1997). It was anticipated that nurses who worked with women in labor on a daily basis would have higher self-efficacy scores for labor support than nurses who did not work daily with women in labor.

All labor and delivery nurses ( $N = 33$ ) and postpartum nurses ( $N = 35$ ) working at one hospital in Southern Ontario, Canada, were invited to complete the questionnaire twice, 1 week apart. The follow-up time frame of 1 week was selected to avoid direct memory recall from completing the questionnaire and to avoid potential changes because of new clinical factors. A confidential code (mother’s maiden name) was requested to use in

maintaining participants' anonymity. However, this method did not permit follow-up reminder notices.

Questionnaires were completed by 31 out of 33 (94%) of the labor and delivery nurses and 22 of 35 (63%) of the postpartum nurses and 2 others who did not complete the question about where they worked. The overall response rate was 55 of 68 (81%). The response rate for nurses completing and returning two questionnaires was 32% (22 of 68). Most of those who completed the questionnaires twice were labor and delivery nurses (14 of 22, or 64%).

All respondents were female, and their mean age was 39 years ( $SD = 9.9$ ). Forty-one percent of the nurses (21/52) worked full-time, 52% (27/52) part-time, and 8% (4/52) were on-call staff. As a measure of the internal consistency, Cronbach's alpha coefficient for the labor support scale was .98, and the test-retest correlation was .93.

There was a statistically significant higher self-efficacy score for labor and delivery nurses compared with postpartum nurses, using the Wilcoxon rank sum test ( $p < .0001$ ). The median value for labor and delivery nurses was 92.0 ( $M = 91.2$ ,  $SD = 7.7$ ) out of a maximum score of 98, compared with a median of 65.0 for postpartum nurses ( $M = 60.1$ ,  $SD = 19.1$ ).

Thus, Phase 1 launched the development of a questionnaire measuring nurses' self-efficacy for labor support. The response rate of 32% for two returned questionnaires to assess test-retest reliability is a limitation. However, the results were good, as was the response rate for the evaluation of other psychometric properties (81%). The evaluation of the psychometric properties of the self-efficacy scale provided beginning evidence of its reliability and validity.

## Phase 2: Nurses' Self-Efficacy for Labor Support and Factors Influencing Implementation

Nurses' self-efficacy for labor support was assessed at four hospitals in a different Ontario city than was Phase 1. All institutions approached agreed to participate in the study, which was conducted in 1996 at two secondary care or community hospitals (A, B) and two tertiary care hospitals (C, D). Hospital A had 228 beds, 20.5 full-time equivalent nurses, and 2,134 births in 1996. Hospital B had 96 beds, 33 full-time equivalent nurses in labor and delivery, and 2,624 births. Both secondary hospitals had the staffing goal of 1 nurse to two women in labor and usually had 4 nurses on the day shift. Hospitals C and D were university teaching hospitals and had high-risk obstetric services and neonatal intensive-care units. Hospital C was the largest hospital in the region, with 700 beds, 41 full-time equivalent nurses in labor and delivery, and 3,381 births. Hospital D had fewer beds (458) but employed a similar number of nurses in labor and deliv-

ery (40 full-time equivalent nurses) and had 2,928 births. The staffing goal in the labor and delivery units at both tertiary hospitals was a ratio of 1 nurse to one or two women in labor. Typically, there were 8 staff nurses on each day shift at both tertiary hospitals.

Self-efficacy questionnaires were mailed to all nurses who worked in the labor and delivery units. One reminder letter was sent after 2 weeks, and the questionnaires were mailed again to nonresponders after 1- and 2-month intervals (Dillman, 1978).

Nurses' views about the factors that assisted and prevented the implementation of labor support policy recommendations were elicited by open-ended questions. Content analysis was performed using the Krippendorff framework (1980). The data were coded by one of the investigators (BD) into categories for each question. These categories were independently coded by the other investigator (EH), with an agreement rate of 95% (117/123). The results were compared and discussed until 100% agreement was achieved.

## Results

The response rates of questionnaires ranged from 85% to 90% across the four hospitals, with an overall rate of 88% (152/173). All nurses were female, most (78% to 100%) had a diploma education, and two thirds (67%) had worked on their unit for more than 5 years. The mean self-efficacy scores at each hospital ranged from 86.3 to 92.1 of a possible maximum score of 98. More than 90% of the nurses wrote comments about the factors in their workplace that assisted and prevented them from providing continuous support. Some respondents wrote more than one comment per question. Most of these com-

Labor and delivery nurses had high self-efficacy or confidence about providing labor support.

ments (78%) were coded into the categories listed in Table 2. All other coded categories had a total of six or fewer comments distributed across the four hospitals.

Nurses identified adequate staffing as the main factor that enabled them to provide labor support and inadequate staffing as the main factor preventing such support (see Table 3). The physical environment and management support (or lack thereof) were other factors nurses mentioned as both assisting and preventing them from providing labor support. Although they reported that teamwork facilitated the provision of labor support, nurses

**TABLE 2**

*Labor Support: Factors Perceived by Nurses as Assisting and Preventing Implementation, and Types of Additional Training Desired to Maintain Competence*

<i>Labor Support</i>	<i>Hospitals</i>			
	<i>Secondary</i>		<i>Tertiary</i>	
	<i>A (n = 34)<sup>a</sup></i>	<i>B (n = 25)</i>	<i>C (n = 47)</i>	<i>D (n = 46)</i>
Factors assisting				
Adequate staffing	6 (18%)	12 (48%)	20 (43%)	12 (26%)
Physical environment	12 (35%)	3 (12%)	10 (21%)	—
Education	3 (9%)	3 (12%)	6 (13%)	7 (15%)
Teamwork	2 (6%)	6 (24%)	3 (6%)	6 (13%)
Management support	2 (6%)	8 (32%)	3 (6%)	8 (17%)
Factors preventing				
Lack of staffing	22 (65%)	12 (48%)	34 (72%)	30 (65%)
Negative staff attitudes	2 (6%)	1 (4%)	5 (11%)	2 (4%)
Physical environment	4 (12%)	—	2 (4%)	—
Lack management support	5 (15%)	—	3 (6%)	2 (4%)
Types of additional training desired				
Workshop	14 (41%)	11(44%)	15 (32%)	10 (22%)
In-service/update	10 (29%)	7 (28%)	7 (15%)	10 (22%)
Demonstrations in unit	3 (9%)	5 (20%)	7 (15%)	7 (15%)
Staff discussions	6 (18%)	4 (16%)	4 (9%)	4 (9%)
Rounds	5 (15%)	—	1 (2%)	1 (2%)

*Note.* The response rate was  $\geq 85\%$  at each hospital with (*n*) = number of respondents.  
<sup>a</sup> All nurses who worked in a combined labor and delivery and postpartum unit.

cited negative staff attitudes as a factor preventing them from providing continuous professional labor support. When asked, “What type of additional/training education programs would assist you to maintain competence” with respect to labor support, nurses’ most frequent responses were workshops and in-service education sessions.

## Discussion

The mean self-efficacy scores of labor and delivery nurses were high at the Phase 1 study hospital and at each of the Phase 2 study hospitals. At these five hospitals, the nurses appeared confident about their ability to provide the behaviors encompassed by the term labor support. However, when work-sampling observations were made of the actual care provided, the nurses in this study spent between 11.7% and 29.8% of their time in labor support, excluding time spent in meal breaks and assistance at caesarean deliveries (Davies, 1999). The nurses’ behavior thus was not congruent with the evidence-based recommendations regarding continuous labor support (Society of Obstetricians and Gynaecologists of Canada, 1995) or pregnant women’s expectations of their

nurse’s role during labor and delivery (Tumblin & Simkin, 2001). A dichotomy between attitudes and behavior was noted by Miltner (2000) in a survey of intrapartum nurses. Many participants commented about the importance of providing labor support yet reported a “lack of labor support given by nurses in general” (Miltner, 2000, p. 497).

In contrast, postpartum nurses were found to be significantly less confident about providing labor support, which suggests that the self-efficacy scale has construct validity. Social cognitive theory (Bandura, 1997) may be a useful theoretical approach to use in developing and evaluating future educational interventions, including cross-training programs for postpartum, nursery, or other nurses to enhance the availability of skilled nurses for childbirth within a hospital.

The question arises as to whether social cognitive theory is the best theoretical approach to study the behavioral change necessary for the transfer of clinical guidelines into practice. In the Netherlands, a study of general practitioners’ attitudes about the prevention of cardiovascular disease found that despite the generally positive self-efficacy expectations of practitioners, few organizations

**TABLE 3*****Participants' Views About Factors Related to the Provision of Labor Support***

<b>Staffing</b>	<p>“At 2:00 a.m. it is difficult to increase staffing to meet unexpected increase in patient demand. From my point of view, lack of nurses is the primary reason for inability to give one to one care.”</p> <p>“Workload is inconsistent with 1:1 care-supportive. Should be one patient to one nurse—usually is not.”</p>
<b>Physical environment</b>	<p>“Improved physical environment, i.e., larger rooms, more showers and tubs (in each room), less sterile atmosphere with appropriate decor and furniture.”</p> <p>“Single laboring room—privacy. Family contact—added support. Showers in laboring rooms—comfort measure. Birthing beds—position change. Blanket warmer—warm blankets to lower abdomen and back. Ice machine and pantry provide continuous moisture to mouth—added strength via nourishment.”</p>
<b>Teamwork</b>	<p>“Staff on the unit believe in the importance of the supportive role, allow you to follow through—timing of breaks.”</p> <p>“Individual nurses sticking together to provide or try to see that this type of support is provided.”</p> <p>“The cooperation, companionship, support physically and emotionally from co-workers in the same working environment.”</p>
<b>Management support</b>	<p>“Awareness by team leader and nurse manager of more time needed to allow labor support to be positive and possible.”</p> <p>“Many charge nurses and the nurse manager may feel pressured by budget restrictions and therefore do not ask for, call in or recruit extra nursing personnel to ensure continuous, close, professional support as often as they should.”</p>
<b>Negative staff attitudes</b>	<p>“Just because that's not how we have always done it.”</p> <p>“Nurses just not wanting to.”</p> <p>“Lack of philosophy. Nurses sometimes get upset if you are not helping outside patient's room. They do not understand why I am always in the room.”</p>

were sufficiently well organized to provide effective preventive services (Hulscher, Van Drenth, Mokkink, Van Der Wouden, & Grol, 1997). Therefore, these authors recommended that changing attitudes was not enough and that future efforts should be directed at the organization of services. Organizational variables influence behavior over and above the aggregate of individual members of the organization (Rogers, 1995). The organizational context is a critical element to include in future studies of research transfer.

Nurses at all five hospitals identified adequate staffing as the major factor both assisting and preventing them from providing labor support. As one participant wrote on the questionnaire, “At 2:00 a.m. it is difficult to increase staffing to meet an unexpected increase in patient demand. From my point of view, lack of nurses is the primary reason for inability to give one to one care.” Flexible staffing models are needed. Several staffing delivery systems have been described in the literature, including on-call nurses, extra nurses to “float” or work where needed, and nurses who have their own caseload (Giefer, 1992; Hodnett, 1996). Staffing policies to ensure one-to-one labor support by nurses were a critical success factor described by hospital staff (anesthesiologists, family physicians, obstetricians, nurses, managers) at four hospitals in Ontario with low caesarean delivery rates (Caesarean Section Working Group, 2000). Additional studies are needed of the effectiveness of different staffing models for intrapartum nursing to ensure the provision of continuous support and to evaluate their impact on patient and health care system outcomes.

The solution to increasing the time nurses are able to provide for labor support is more complex than simply adding more nurses or having flexible staffing models. As reported by the nurses in this study, other factors, including teamwork and negative attitudes (e.g., “nurses just not wanting to”), influence the provision of labor support. Most of the nurses appeared to be receptive to the idea of additional training sessions, including workshops and in-service discussions. These might be helpful forums to discuss attitudes and provide information about the research evidence.

The research evidence for the benefits of professional support has been published only since the 1970s. Moreover, there has been little systematic study of the interventions provided specifically by nurses; 12 of the 14 trials included in the Cochrane Review involved other caregivers, including midwives, childbirth educators, doulas, and family members (Hodnett, 2000).

Staff nurses reported that management support was an important factor for both assisting them and preventing them from providing labor support. Nurses' expectations about managers' actions were not always congruent with a policy of continuous professional support. As one nurse reported, “Many charge nurses and the nurse manager

may feel pressured by budget restrictions and therefore do not ask for, call in or recruit extra nursing personnel to ensure continuous, close, professional support as often as they should." No cost-effectiveness analyses were found in the literature, although one report outlined as benefits of labor support the possible reductions in cost for the following: decreased caesarean deliveries, anaesthesia, length of hospital stay for mothers and infants, operating room use, and medications (Kennell, Klaus, McGrath, Robertson, & Hinkley, 1991).

There is very little in the literature about effective administrative strategies to facilitate a policy of continuous labor support provided by nurses. One nurse manager recommended that a successful approach has been to remove all comfortable chairs from the nurses' station and place them in the patients' rooms (Hodnett, 1997). In this study, an improved physical environment was the second most frequent response to the question about factors that assisted nurses in the provision of labor support.

## Management support is essential in the implementation of evidence-based clinical practice.

In the future, it is important for practitioners to address the caring or humanistic components of practice. Kitson (1997), director of the Royal College of Nursing Research Institute in the United Kingdom, suggested the need for new metaphors, such as "being there for you," to portray the essence of nursing practice to the public (p. 114). Furthermore, the nursing profession needs to be clear about the value and cost of caring: "if you don't cost it in, then you have counted it out" (p. 115). The caring dimensions of nursing practice need to be better articulated and more visible in notations on patient charts, workload measurement systems, performance appraisals, and patient satisfaction surveys. They need to be seen as a routine function of the daily care nurses provide.

In conclusion, the time is right to examine the issue of nurses' provision of continuous labor support. Labor and delivery nurses are confident about their ability or self-efficacy to provide labor support, yet a gap remains in actual practice. Research is needed about the most effective approach to implementing evidence-based recommendations. Clinical practice challenges include the administration of flexible staffing schedules and collaboration with other caregivers (midwives, doulas, childbirth educators, and laywomen) to ensure that someone pro-

vides labor support to women. Finally, in-service training programs are needed that focus on the humanistic or caring aspects of nursing practice. The Self-Efficacy Labor Support Scale as described in this article might be a helpful tool for evaluating education programs for new learners. Achieving the best practice for women in labor, such as the provision of continuous support, is an important goal for the new century.

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*Barbara L. Davies is an associate professor and career scientist, School of Nursing, University of Ottawa, Ontario, Canada.*

*Ellen Hodnett is a professor and Heather M. Reisman Chair in Perinatal Nursing Research, Faculty of Nursing, University of Toronto, Ontario, Canada.*

*Address for correspondence: Barbara L. Davies, RN, PhD, University of Ottawa School of Nursing, Faculty of Health Sciences, University of Ottawa, 451 Smyth Road, Ottawa, Ontario, Canada, K1H 8M5. E-mail: bdavies@uottawa.ca.*