

# How Caregivers Manage Pain and Distress in Second-Stage Labor

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Innovative care interactions are needed when helping a woman who exhibits severe pain or distress during the second stage of labor. We describe how caregivers and laboring women interacted during second-stage labor, with particular attention to how caregivers managed pain and distress. We used observational methods to perform a microanalysis of behaviors from video-recorded data. Pain occurred during labor contractions, and distress (an emotional response to pain) manifested primarily between contractions. Four patterns of women's behavior were identified: 1) no pain or distress, 2) low-level pain and/or distress, 3) focused working, and 4) severe pain and/or distress. Successful care was identified as enabling the woman to maintain herself in any state other than severe pain and/or distress. Particular modes of speech used by the caregiver enabled the attainment of successful care when the woman was not in severe pain or distress. When severe pain or distress existed, innovative caregiving transitioned the woman to another state. Successful intervention strategies included 1) giving innovative directions and 2) "talking down." Ordinary modes of "birth talk" can be used when severe pain or distress is not manifested and when the primary care problem is to assist women with bearing down. Innovative care interactions are needed when faced with severe pain or distress. Managing labor pain is an ongoing focus of clinicians who provide care to women in labor. In addition to pain, women might also experience distress, an emotional response to the labor experience. Whether from choice or necessity, caregivers for laboring women need nonpharmacologic interventions and interpersonal skills that can help women endure labor and give birth. Labor is hard work, and even in precipitous labors most women require assistance. Care given to a laboring woman consists of employing comforting strategies that help her cope with the pain of uterine contractions. The purpose of these comfort strategies is to help the woman find needed resilience during labor. Most cultures have mechanisms for providing this kind of support. In this article, we identify patterns of behavior used by laboring women and describe successful and unsuccessful strategies used by caregivers to help these women deal with pain and distress during the second stage of labor. *J Midwifery Womens Health* 2010;55:38–45 © 2010 by the American College of Nurse-Midwives.

**keywords:** caregiving, childbirth, communication, nurse-patient, labor pain, midwifery, nursing, maternity, second-stage labor, qualitative, video

## LITERATURE REVIEW

The literature specific to second-stage labor focuses primarily on physiologic characteristics, including the nature of bearing-down efforts, positions for labor and birth, fetal physiology, and factors related to perineal trauma.<sup>1–4</sup> Social-behavioral features have been studied by researchers in the Second Stage Labor Project.<sup>5</sup> The purpose of the National Institutes of Health–funded grant was to describe care in second-stage labor in enough detail so that care protocols could be developed and taught to obstetric personnel in order to conduct further studies on how care practices might affect clinical outcomes. The experimental phase of the project was never completed, but a large number of behavioral aspects of care in second-stage labor were described, including specific social interactions, women's perceptions about labor, and caregivers' interpretations of sounds made by laboring women during the second stage.<sup>6–14</sup>

Studies about women's levels of satisfaction regarding their childbirth experiences have not targeted second-stage labor, but indicate that women value factors such as individual attention from caregivers; caring, competent caregivers; communication; information; advocacy; pain relief and physical comfort; emotional support; and personal control.<sup>15–24</sup> Hodnett's<sup>24</sup> systematic review about women's satisfaction found that attitudes and behaviors of caregivers were the most powerful influences on how women rated their satisfaction with childbirth. Women also want to "perform" well, and critical factors in their assessment of their own performances include how well they maintain self-control and whether or not they demonstrate self-described undesirable behaviors.<sup>25</sup>

A recent publication by Second Stage Labor Project members describes the reasons why caregivers change their basic caregiving style.<sup>14</sup> The authors found that caregivers who were primarily supportive of women's physiologic bearing-down efforts might change their style of interacting in response to diminished urges to push, fatigue, anguish, pain, or fear, or in relation to fetal indications, support-person direction, or routine practices of the setting. These authors did not explore whether changing styles was successful or not in altering the various problematic situations.

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Our analysis<sup>26</sup> of the basic talk demonstrated by caregivers (“birth talk”) showed that caregivers tended toward one of two distinct styles of talk during woman’s bearing-down efforts: 1) directed toward forced bearing down or 2) supportive of physiologic bearing down. The first style is caregiver led and focuses on trying to control the woman’s bearing down. This directive style translated to getting the woman to push long and hard. The supportive style is patient led and focuses on assisting the woman to follow her physiologic sensations. The latter style encouraged self-direction during bearing down rather than depending on direction from the caregiver. Caregivers also used generalized supportive interactions between contractions. These interactions did not exhibit features of either caregiver style, because between contractions bearing down was not the task at hand. The interactions during the rest period were characterized as encouragement, acknowledgment, feedback about progress or performance, questions, explanations about what was going on, instructions, and easing tensions with humor.

Labor support is the term used for a variety of interactions between caregivers and laboring women. Labor support activities are the result of many factors present in individual situations but always includes attention to comfort and pain relief.<sup>27–34</sup> Hodnett’s<sup>35</sup> protocol for structured care in labor included paying careful attention to women’s pain and distress and delivering emotionally supportive care. Supportive care is associated with a variety of positive outcomes, including lower rates of analgesia and anesthesia, shorter labors, higher APGAR scores, and increased maternal satisfaction.<sup>36</sup> Except for Simkin and colleagues’ discussions of position changes in second-stage labor,<sup>30,31</sup> authors have not differentiated supportive care during various stages of labor.

Maternal satisfaction with care and labor support activities has been described only in retrospect, using recall of events and responses to generalized questions (e.g., “What does labor support mean to you?”). Actual events of care behaviors (labor support) have not been studied to determine whether or not these make a difference in women’s behaviors during labor. Presumably, if labor-support activities are successful in decreasing pain and/or distress, women might experience more satisfaction with the care they receive. Our research question was, “What

constitutes successful care to women who demonstrate indications they are experiencing pain and/or distress during second-stage labor?”

## THEORETICAL FRAMEWORK

Morse’s praxis theory of comfort<sup>37–38</sup> was used as the theoretical framework for this project. During trauma and urgent care, providing comfort is depicted as a cyclical process, which is always patient led and initiated when the caregiver recognizes the patient’s need for comfort. The patient emits cues (single signs of discomfort), signals of discomfort (several behavioral cues), and indices of distress (clusters of discomfort signals that occur simultaneously) that convey acute and urgent discomfort. The caregiver implicitly or explicitly assesses the situation and intervenes with a comforting strategy or intervention. If the comforting strategy is successful, the patient responds positively; otherwise, the cues, signals, and indices continue and the caregiver uses another strategy. The caregiver continuously evaluates the effectiveness of the comforting strategy, modifying strategies as necessary.

## METHODS

This study was a secondary qualitative analysis of data from the Second Stage Labor Project.<sup>5</sup> Data consisted of videotapes (now transferred to digital media) recorded between 1986 and 1989 of laboring women and their caregivers during second-stage labor. We used linguistic and conversational analysis methods to produce microanalytic descriptions of interaction patterns of talk and observational methods to describe their efficacy.

Recordings were reviewed for both common and unique caregiver-woman interactions that involved varying levels of pain or distress. Paradigm case examples were selected for detailed microanalysis. Displayed behaviors were examined on a second-by-second basis so the exact actions and modes of talking by caregivers could be identified. From the precise descriptions of specific events, patterns of interactions across cases were identified and described. Details of the methods used are described in a companion publication to this article.<sup>26</sup> In this study, pain refers to physical pain from uterine contractions. Distress is an emotional response expressing displeasure about factors other than labor pain. Distress might indicate physical or emotional displeasure and might be strongly expressed.

In general, pain occurred during contractions, whereas distress occurred during rest periods. All the women displayed some pain and expressed distress at least once. We categorized displayed distress in two ways: 1) internally focused and 2) relationship focused (Table 1).

Descriptions of talk by caregivers are referred to as the “birth talk register.”<sup>26</sup> A register is a distinct set of phrases and interactions, including linguistic features of words that

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**Table 1.** Types of Distress

Internally Focused	Relationship Focused
<b>Other discomforts</b> My back hurts. I can't stand this [oxygen mask]. Get that [monitor belt] off of me. I'm tired.	<b>General cries for help</b> Do something! Help me! You're not helping me.
<b>Queries and concerns about progress or time</b> How much longer? When's this gonna end? Did you see him? I'm disappointed. I'm pushing and then it seems I gotta do it all over again.	<b>Distress about what caregiver is doing or going to do</b> What's he doing? [about a doctor handling forceps] Get your hands out! [about a vaginal exam] Oh don't [do that]
<b>Doubts about her ability to continue</b> I can't do this no more. I'm dying. I wanna die. But the baby isn't coming.	
<b>Expressions of anxiety because of lack of information</b> What's happening? What the hell is going on?	

are used in particular situations. Other registers include “infant talk” and “comfort talk.”<sup>39,40</sup> A register extends across cultures and languages, and its intonation patterns can be recognized even if the actual words are not understood by the observer. The birth talk register serves as the foundation to this study. This register describes the particular kind of talk used by caregivers when they are dealing with the primary care needs of second-stage labor, maternal bearing down, and eventual birth of the infant. In this article we call this the “ordinary” birth talk register.

We used a convenience sample of women giving birth in a western city in the United States. The data are now deidentified; we had no access to the original demographic data. Caregivers included family members, registered nurses, nurse-midwife students, certified nurse-midwives, and physicians. The settings were two hospitals and a freestanding birth center connected administratively to one of the hospitals. Informed consent procedures approved by the original institutional review board were followed at the time of data generation. Permission for this study was obtained from the University of Utah Institutional Review Board.

## RESULTS

### Laboring Women's Categories of Behavior

The original convenience sample consisted of 23 laboring women aged between 18 and 36 years at the time of original data generation, 1986–1989. They were of mixed parity, at term, and of low-to-moderate obstetric risk. All women experienced vaginal births, and all newborns were healthy. The duration of second-stage labor ranged from 0.1 hour to

6 hours 35 minutes. Some women had continuous epidural anesthesia; none used narcotic analgesia.

Because the original intention of the Second Stage Labor Project<sup>5</sup> was focused on caregiver behaviors rather than on the laboring women, these recordings did not always provide clear views of facial expressions. The women were lying in a labor bed, a birth bed, or on a delivery table, with the exception of two women who walked around the room at times. Many women did change positions in bed, which was generally accomplished with the prompting and help of caregivers.

Four broad categories of laboring women's behavior were evident: 1) no pain or distress, 2) low-level pain and/or distress, 3) focused working, and 4) severe pain and/or distress. No individual woman stayed entirely in one category. All women were observed in at least two categories, although each woman remained primarily in one category.

### No Pain or Distress

The laboring women in this category were characterized as being predominantly quiet. There were no direct expressions of pain, nor behavioral patterns that were interpreted as such. Most of the women in this category had received epidural anesthesia, but not all. When women in this category spoke, they used a normal conversational tone of voice. They were able to joke and talk about things other than labor and birth.

### Low-Level Pain and/or Distress

The laboring women in this category expressed pain or distress—which we interpreted as not being very high—infrequently. For example, one woman expressed pain once during a contraction by the simple vocalization, “Ohhhhhhh”; otherwise, she was almost silent. Low-level distress was characterized by complaints vocalized with little emotional tone. The complaints did not persist or escalate.

### Focused Working

This pattern was characterized by women who made obvious bearing-down efforts, audible breathing, and/or guttural vocalizations. Some women spoke during contractions, often talking to the infant (e.g., “Oh, come out, please come out”). During rest periods, conversation occurred. Pain might be discussed when pain was not present. Women were capable of making jokes. For example, one woman told her husband during the rest time, “Next time, YOU'RE gonna have the baby.”

### Severe Pain and/or Distress

These women expressed pain during contractions, with vocalizations and behaviors indicating high levels of pain. Most pain was expressed by sounds alone, such as

**Table 2.** Distress Sequences in Second-Stage Labor

Distress Sequence	Examples
Confirmation of pain	Woman: IT HURTS! Caregiver: I know!
Progress query followed by a progress report	Woman: When is it gonna come out? Caregiver: Soon, soon, you're making good progress.
Discouragement, followed by affirmation of woman's ability	Woman: I CAN'T!! Caregiver: Yes you can!  Woman: I can't push no more. Caregiver: Yeah, you can.
Choice dilemma: caregiver question followed by no answer to the question	Caregiver: Do you want to go to your left side? Woman: Ohhhhhh.  Caregiver: Wanna push on your side to get that pressure off your back? Woman: Baby.  Caregiver: Need anything under your legs when you push? Woman: I don't know. It hurts so much.
Countering: caregiver talk followed by strong contrary declaration by woman	Caregiver: Push hard now! Woman: I AM!!  Caregiver: Let it build. Woman: IT'S BUILDING  Caregiver: Go with the pressure. Woman: I'M TRYING!!  Caregiver: When you push you're showing that much [two fingers form a small circle]. Woman: I wanna see THAT MUCH [two hands form a large circle]!
Continual questioning: woman searching for comfort in the words of the caregiver	Caregiver: You're doing it. You're doing so good! Woman: How do you know I can do it? Caregiver: Because you got plenty of room and you want the baby out. You wanna be a mom. Woman: Can't you get him with the forceps? Caregiver: No. Woman: Why? Oh Jesus!

screaming, yelling, crying, or moaning. One dramatic behavior that expressed high-level pain was a woman grabbing the bedside rail and shaking it forcefully. Distress was expressed between contractions, primarily by words, especially cursing. Other behaviors accompanied distress, such as covering the face with the hands. The tones of the women's voices were different from tones associated with normal conversation; the women sounded tremulous and were tearful, whining, pleading, or crying. Women in severe pain or distress were unable to see humor in jokes or comments made by others.

#### Interaction Patterns Between Women in Distress and Caregivers

Distinct patterns of interactions between the caregiver and the laboring woman expressing distress between contractions were labeled "distress sequences." This allowed specific categories to be established, as illustrated in Table 2.

In the first three distress sequences, confirmation of pain, progress query, and discouragement, the laboring

women expressed the overwhelming feeling of pain, a disbelief that the event would end, and an inability to endure any more. The caregivers attempted to restore confidence through acknowledgment, information, and reassuring words.

The choice dilemma, countering, and continual questioning distress sequences are particularly interesting patterns. The first two demonstrated responses from the women that were opposite from each other. In the choice dilemma, women were unable to verbalize their desires, whereas in countering, the women emphatically asserted themselves. The sequence of continual questioning represents extended countering combined with the emotional elements of the first three distress sequences described, during which caregivers attempted to convince the women they were on the right course.

Caregivers commonly offered choices to women about a variety of issues, such as whether or not to change positions, drink fluids, or try something different. If the woman was feeling pain, however, she was frequently unable to

make decisions. The woman would simply not respond to the question (as if she hadn't heard it). If she did give a response, it did not actually answer the question. It might be that she couldn't absorb the information, felt overwhelmed by even simple choices, or couldn't see how the question was relevant. After it was clear that the woman would not express a preference, the caregiver would make the choice for her. The caregiver would, for example, hand the woman water to drink, or simply be directive: "Let's turn you to your left side."

Countering, in comparison to the choice dilemma, was a way in which the woman would assert herself. We interpreted this interaction as an expression of frustration on the woman's part. Her statements emphasized that she was putting forth every amount of effort she could. An extension of the woman asserting herself is seen in the distress sequence of continual questioning; she questioned the whole effort to continue.

Continual questioning involved frustration about a perceived lack of progress toward birth. In these extended interactions, the women expressed their perceptions that the whole effort of continuing was futile. Caregivers disagreed with that assessment and tried to give reassurance and rational explanations. The women repeatedly returned to the same issue, reiterating the same question but using different words. Caregivers persisted with their responses that things were normal and all right. None of the women were successful in securing the caregivers' agreement. The caregivers continued with explanations and reassurance, and the women eventually abandoned the discussion.

### Caregiver Success in Dealing With Pain or Distress

As we explored the interactions between laboring women and caregivers, a critical point of discussion was, "What constitutes successful caregiving?" We concluded that care was not successful when the laboring women entered or remained in the severe pain and/or distress state. We labeled no pain or distress, low-level pain and/or distress, or focused working as "goal states." Assisting the woman to remain in goal states or to change from severe pain and/or distress to one of the goal states was defined as a successful care intervention. When women were in one of the three goal states, they were deemed in control of themselves and could work through each contraction. By contrast, when they were in severe pain and/or distress they demonstrated behavior consistent with being out of control both emotionally and behaviorally. This assessment of what constitutes successful care is similar to the purpose of comfort in trauma care, wherein a patient is able to maintain control of self<sup>40</sup> and also correlates with women's expressed desires to sustain self-control and avoid undesirable behaviors during labor.<sup>25</sup>

When women were in any of the three goal states, any kind of birth talk was successful in helping the woman

maintain that state. It appears the birth talk register involves a negative feedback system; as long as the woman remained in a goal state, birth talk functions to reinforce that state. This feedback system may account for why both the "directed toward forced bearing down" and the "supportive of physiologic bearing down" styles of birth talk assisted women to maintain one or another of the goal states equally well. Both caregiver styles were successful in accomplishing the goal of talking through<sup>41</sup> a painful contraction when the woman was not exhibiting high pain or high distress; getting through contractions is the primary work of the laboring woman.

### Severe Pain and/or Distress

When a laboring woman was in severe pain and/or distress, caregivers' use of ordinary birth talk behaviors proved inadequate to move her to a goal state. Birth talk functioned in a positive feedback loop in this situation; if the response to severe pain and/or distress was the ordinary birth talk register, the severe pain/distress would continue and often escalate instead of diminish. This interaction pattern would persist as long as the caregivers continued only to use one or another of the ordinary birth talk behaviors. In these cases, innovative behaviors were needed to get the woman into a goal state.

A common distress escalation was characterized by the woman resorting to saying, "Do something!" or "Help me!" The laboring woman invoked a need for help from the caregiver. In this relationship-focused type of distress, we observed some caregivers temporarily withdrawing from all interactions with the woman once one of these extreme utterances had been made. In turn, this withdrawal would result in further escalation of the woman's pain/distress behaviors.

We identified two successful interaction patterns to "flip" a woman from the severe pain and/or distress state to a goal state. We called these patterns innovative directions and talking down.

### Innovative Directions

One woman exhibited escalating pain until the caregiver gave her the following instructions at the beginning of and throughout a contraction:

*"Close your mouth and push it all out your bottom."*

*"Don't let him back up."*

*"Send those screams down here."*

The caregiver had not used these specific instructions previously. The woman was able to focus on and carry out these new instructions. Her pain display went away—she changed from screaming in pain to a focused working state. Subsequently, the caregiver was able to

**Table 3.** Talking-Down Sequence

Step	Definition
1. Attention getting	Attention getting usually involved calling out the woman's name at least twice; the words "listen, listen," were also used.
2. Positioning <i>en face</i>	Positioning <i>en face</i> involved the caregiver moving into the woman's personal space and positioning herself within 8 to 10 inches of the woman's face, often aligning her face with the woman's and engaging in forced eye contact.
3. Lowering the tone of voice	In lowering the tone of voice, the caregiver whispered or talked barely above a whisper for an extended period of time (32 seconds and 29 seconds in our data). This low volume kept the woman's attention and enabled communication.

abort pain displays with an abbreviated version of the original directions: "All out your bottom."

### Talking Down

The talking-down sequence was observed with two different women in severe pain and/or distress. We labeled these sequences talking down because the caregivers' task seemed to be to move the laboring woman from escalating distress down to a lower level of intensity; this was accomplished by a distinct method of talking to the women.

One case was particularly dramatic. The woman exhibited over an hour of high emotional distress and excruciating pain displays we called "complete agony." The caregiving team—three individuals—tried a wide variety of strategies from the birth talk register. The caregivers were, overall, supportive of physiologic bearing down, but occasionally tried instructions directed toward forced bearing down. They tried several position changes to alleviate the laboring woman's pain and distress. They often gave rational explanations, explaining to the woman what was happening physiologically. These birth talk behaviors proved unsuccessful; the woman remained in agony. Finally, one caregiver performed talking down, and the woman was able to gain control and change to the focused working state during the next contraction.

The talking-down method, used between contractions, has three distinct steps, illustrated in Table 3. The caregiver forced the woman to pay close attention by 1) calling out, 2) positioning herself very close to the woman's face, and 3) talking in such a low tone of voice that the woman had to be quiet to hear. This broke the previous interaction pattern. By getting out of the severe pain/distress positive feedback sequence, the woman regained some ability to focus attention on bearing down itself instead of concentrating on the pain.

The lowered tone of voice was important and differentiated talking down from talking through.<sup>41</sup> Caregivers who use talking through matched the intensity of their voices to what the patient was experiencing. Talking through often got louder as it progressed.

In our examples of talking down, one caregiver displayed comfort touch by lightly stroking the woman near her face. It is unclear if touching, as a comforting measure, is as critical an element of the talking-down strategy as it is in the talking-through interaction.<sup>41</sup>

### DISCUSSION

We have described four patterns of women's behavior during second-stage labor. In three of these states, no pain or distress, low-level pain and/or distress, and focused working, women appeared to maintain self-control, and were able to work through each contraction. We identified assisting the woman to attain or maintain any of these states as a goal for care. The fourth state, severe pain and/or distress, was identified as a problem to be solved.

Two caregiver styles of birth talk, directed toward forced bearing down and supportive of physiologic bearing down, were found to be equally effective in helping laboring women work through contractions, if she was not in severe pain and/or distress. While the woman remained in a goal state, caregivers could successfully talk her through a contraction by using either style of birth talk.

In the presence of severe pain or distress, the repertoire of the ordinary birth talk register was inadequate to help move a woman into a goal state. Roberts et al.<sup>14</sup> demonstrated that attempting to help laboring women to cope with maternal fatigue, anguish, pain, or fear were reasons caregivers who primarily used a supportive practice style changed to using a more directive approach. However, using either the supportive or directive caregiving styles kept the caregivers within the range of usual approaches. These approaches were noted to be useful and appropriate for dealing with the problem of bearing down and giving birth. Dealing with severe pain/distress is a different problem. Innovative caregiver interventions appear to be required.

We described two effective techniques: the innovative directions approach and the talking-down approach. One common factor between these approaches was the element of surprise. In each effective technique, the caregiver did something different than what had been done before.

This analysis is limited by the sample, both its size and quality. We were only able to observe events that occurred during these particular labors. Being recorded, in and of itself, may have changed participants' behaviors in unknown ways. The data are old, the sample size was small, and now that the data are deidentified, generalization is limited. This should be regarded as a pilot study that has identified some successful and unsuccessful caregiver strategies. This study can serve as a stimulus for further research in this area.

## CONCLUSION

Although the directive style of birth talk was found to be effective in talking a woman through contractions, there is strong evidence against its use. It increases the risk for adverse physiologic effects, such as lower umbilical artery pH values and more fetal heart rate decelerations.<sup>1-3,42</sup> Strenuous bearing down during second-stage labor, often resulting from the use of the more directive style, is detrimental to fetal oxygenation and of little benefit to fetal descent.<sup>1-3,42</sup> Encouraging this type of pushing has not been shown to shorten the length of time of second-stage labor and might actually result in greater fetal hypoxia when compared with the style supportive of normal physiology.<sup>1,3,42</sup> In addition, forced, closed-glottis pushing might be a factor in increasing women's fatigue during second-stage labor, which, in turn, might increase the risk for instrumental or operative births because maternal exhaustion is an indicator for these interventions.<sup>43</sup> Because this standard directive style is not effective, it is important to identify successful labor support actions.

The taxonomy of women's behaviors described here may be useful to help decide if care is effective or not. When women are not in severe pain or distress, focusing primarily on the issue of bearing down and using birth talk that addresses this issue is appropriate. However, once a caregiver is able to recognize that a woman has moved into severe pain or distress, measures designed to prevent pain/distress from turning into agony are needed.

The issue of women's sense of self-control in labor emerged as an important concept. The ability to maintain a sense of self-control after interactions with caregivers was a critical factor in the model of Skuladottir and Halldorsdottir<sup>44</sup> about how women with chronic pain avoid demoralization. In this model, losing a sense of self-control resulted in demoralization, a concept we relate to distress and dissatisfaction. Little research has been done about the influence maternity caregivers have on women's sense of self-control regarding childbirth.<sup>23</sup> Further study should be directed toward exploring this relationship.

A large repertoire of possible techniques is necessary for caregivers to be effective for women who have a wide variety of laboring styles, and especially for women who have moved into severe pain and/or distress states. Expert labor nurses have their respective tricks of the trade,<sup>45</sup> which they developed over time and use for comforting and caring. Based on our personal experiences as caregivers and recipients of care, we believe there are many examples of successful techniques not shown in these data. Additional research should be directed toward identification and precise descriptions of communication techniques that help women gain or maintain control and continue laboring without distress or agony. This implicit knowledge that caregivers have about caring and

comforting techniques should be made explicit so it can be taught, studied, and refined.

The original data for this research was generated by the Second Stage Labor Project (grant 1 R01 NR 01500-003, National Center for Nursing Research, National Institutes of Health, Department of Health and Human Services), directed by Joyce Roberts, CNM, PhD, FAAN, FACNM. This paper was supported by grants from the Gamma Rho Chapter of Sigma Theta Tau and the Research Committee of the College of Nursing, University of Utah.

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