

## Implications of Perceived Control for Recovery from Childbirth for Unplanned Cesarean, Planned Cesarean, and Vaginal Deliveries

**Author:** Gray, Jennifer A

**Publication info:** Journal of Prenatal & Perinatal Psychology & Health 19. 3 (Spring 2005): 251-267.

[ProQuest document link](#)

**Abstract:** None available.

**Full Text:** Headnote ABSTRACT: This study examines relationships between perceptions of control, postpartum depression, and physiological symptoms in women who gave birth vaginally or by cesarean. Extrapolating from a cognitive framework, it was hypothesized that women who gave birth by cesarean would exhibit lower levels of perceived control and higher levels of depression and physiological symptoms as compared with women who gave birth vaginally. Results were supportive of the hypotheses, suggesting that it may be helpful to explore ways of assisting women to experience greater control over their childbirth. Future research should assess the desire for and the value placed on perceptions of control in childbirth. KEY WORDS: Childbirth, control, caesarean, postpartum depression. INTRODUCTION Medical technology has had a profound impact on childbirth practices in the United States. Increasingly, birth has become medicalized as we look to doctors and technology for answers in our quest for the "perfect birth" (Wertz &Wertz, 1989). Women have gradually given over to doctors the medical control of birth (Wertz &Wertz), a process that traditionally was managed solely by women (the laboring woman, a midwife, and a team of other women for social support). One of the ways in which birth has been impacted by medical technology can be seen in the rates of cesarean deliveries in the United States. Recent reports by the National Center for Health Statistics (Martin et al., 2003) found that cesarean rates in the year 2002 were the highest ever reported in the United States (26.1% of all births). These numbers indicate that although the majority of births that occur in the United States are vaginal births, the number of non-vaginal births is still sufficiently high to warrant a closer examination of contributing variables and implications for cesarean births. In fact, some medical professionals have come to view cesarean birth as non-complicated birth, perhaps as a consequence of what Shearer (1989) has named the "normalizing effect" of such high cesarean rates in this country. What used to occur only in extremely rare and acute emergency situations has now become more normal and less extraordinary as the rates have increased. Cesarean delivery, a unique childbirth method as it is a major abdominal surgery requiring lengthier physiological recovery time than vaginal delivery (Hillan, 1992; Tulman &Fawcett, 1988) may also involve more negative psychological effects that require extended periods of recovery (Edwards, Porter, &Stein, 1994; Mutryn, 1993; Tulman &Fawcett, 1991). A trend toward decreased satisfaction with the birth experience (Oakley, 1983) and lower levels of interaction between newborns and cesarean-delivered mothers (Hwang, 1987; Pederson et al, 1981; Trowell, 1982) is cause enough to generate concern over the facilitation of women's recovery from cesarean childbirth. Some sources even liken the recovery from cesarean childbirth to recovery from PostTraumatic Stress Disorder (e.g., Ryding, Wijma, &Wijma, 1998). However severe the aftermath, it is clear that attention should be given to the recovery process experienced by women who have had a cesarean birth, especially given that findings apply to over a quarter of all births in the U.S.

<i>Birth Type</i>	<i>Mean LAS Score</i>	
Unplanned Cesarean	144.12	135.135
Planned Cesarean	126.15	
Vaginal	170.89	
	<i>Mean MHLC Score (Internal Control)</i>	
Unplanned Cesarean	2.2975	2.21125
Planned Cesarean	2.125	
Vaginal	3.3771	
	<i>Mean MHLC Score (External: Doctor)</i>	
Unplanned Cesarean	2.93	2.8
Planned Cesarean	2.67	
Vaginal	3.9	
	<i>Mean MHLC Score (External: Powerful Others)</i>	
Unplanned Cesarean	3.9	
Planned Cesarean	2.39	
Vaginal	4.03	
	<i>Mean MHLC Score (External: Chance)</i>	
Unplanned Cesarean	3.5	
Planned Cesarean	5.49	
Vaginal	4.58	
	<i>Mean CES-D Scores</i>	
Unplanned Cesarean	2.81	
Planned Cesarean	3.45	
Vaginal	2.9	
	<i>Mean EPQ Scores</i>	
Unplanned Cesarean	62.55	
Planned Cesarean	59.33	
Vaginal	56.17	

Perceived Control An aspect related to childbirth in general, and cesarean childbirth in particular, is the concept of perceived control. Psychological research has shown that "a sense of control is a robust predictor of physical and mental well-being" (Skinner, 1996, p. 549). The perception of control has been shown to reduce stress associated with noxious situations (Glass & Singer, 1972), to aid in coping with major life stressors (Thompson et al., 1993), and to play an important role in various other arenas of health psychology. Perceived control has been found to be a fundamental part of the process of psychological recovery from surgery (Matthews & Ridgeway, 1981; Orbell et al, 1998; Ridgeway & Matthews, 1982). The relationship between control and childbirth and its importance to the mother's recovery has been clearly noted by childbirth researchers: Control has been recognized as a key component in a satisfactory labor process. While a woman expects to have some degree of control over the birth process, her primary satisfaction and self-esteem depend on whether or not she can achieve it.... It has been well documented that women's thoughts, feelings, and attitudes about the childbirth experience later affect their perception of themselves as women and as mothers ... furthermore, such an intense experience as childbirth may exert an influence on the whole individual for an extended period of time. (Campero et al., 1998, p. 397) The Cognitive Connection The important link between perceived controllability and recovery from cesarean childbirth can be found in the literature that examines the relationship between causal attributions and depression. In an attempt to relate current research on learned helplessness back to its roots in attribution and concepts of controllability, Brown and Siegel (1988) found that events attributed to uncontrollable causes were associated with internal, stable, and global attributions, as well as with higher levels of depression. Alternately, events attributed to controllable causes were associated with internal and global attributions, as well as with lower levels of depression. That is, believing that one is not in control is associated with being more depressed compared to believing that one is in control. These feelings of control may or may not have their roots in reality. As originally proposed by Taylor and Brown (1988), even illusions of control may

have positive benefits for the individual. Applying these findings to the area of childbirth, lower levels of perceived control would be expected to be associated with higher levels of depression. Higher levels of perceived control would be expected to be associated with lower levels of depression. Some specific hypotheses that were tested follow: H1: Women who have lower levels of perceived control over their childbirth will experience more negative psychological and physiological symptoms postpartum than women who have higher levels of perceived control over their childbirth. H2: Women who give birth vaginally will maintain higher levels of perceived control over their birth than women who give birth by Cesarean surgery (regardless of whether it is planned or unplanned). H3: Women who deliver vaginally will display lower levels of both physical and psychological (depression) symptoms postpartum as compared with women who deliver by cesarean. H4: Women who deliver vaginally will have the highest degree of perceived control, followed by scheduled cesarean and then unscheduled cesarean. H5; Vaginal birth will produce the least amounts of negative symptoms (postpartum depression and physiological symptoms), followed by increasing levels of negative symptoms (postpartum depression) for scheduled cesarean and unplanned cesarean (though no differences are hypothesized between planned and unplanned cesareans for physiological symptoms). The current study was undertaken with the above theories and hypotheses in mind, in an attempt, ultimately, to aid women in their recovery from childbirth. Research on issues of perceived control provides an appropriate and useful framework for viewing the connections between women's views of their childbirth experience and their subsequent recovery from it.

**METHOD Participants and Procedures** Women in their third trimester of pregnancy were recruited through on-line bulletin boards, chat rooms, e-mail list serves, and fliers to participate in an on-line, two-part (pre-birth and post-birth) questionnaire. The questionnaires were hosted on a pre-existing website devoted to pregnancy and childbirth issues ([www.carolgray.net](http://www.carolgray.net)).

**Pre-Birth Participant Demographics.** 153 women were included in the pre-birth questionnaire, though not all participants completed all sections of the questionnaire. The modal participant was 31 weeks pregnant, had had no problems with her pregnancy (38.6% had no problems, 61.4% had problems), had had no previous births (49.7% no previous births, 28.1% one previous birth, 14.4% two previous births, 2.6% three previous births, 2.7% four or more previous births), was taking childbirth preparation classes for this birth (55.6% took class, 41.8% did not take class, 2.6% missing; 39.2% had taken class with previous pregnancy, 54.9% had not), was 29 years old (range = 14-46), married (81.7% married, 12.4% living with partner, 2.0% single, 2.0% divorced/separated, 0.7% engaged, 1.3% missing), was Caucasian (83.7% Caucasian, 7.8% Hispanic/Latina, 2.0% African American, 2.0% Asian American, 0.7% Native American, 2.6% unspecified "other," 1.3% missing), had a college degree (5.9% some high school, 7.8% high school diploma, 3.3% technical/vocational school, 25.5% some college, 28.1% college degree, 9.2% some graduate school, 19.0% graduate degree), and had an average household income between \$40,001 and \$80,000 per year (11.1% under \$20k, 15.0% \$20k-\$40k, 21.6% \$41k-\$60k, 21.6% \$61k-\$80k, 14.4% \$81k-\$100k, 15.0% over \$101k, 1.3% missing). The modal participant also planned on being attended at her birth by an obstetrician and her partner or the baby's father (60.8% Obstetrician, 7.2% General Practitioner or other doctor, 40.5% Labor and Delivery Nurse, 30.7% Midwife, 13.7% Doula, 40.5% Relative or Friend, 85.6% Partner/Father of the baby).

**Post-Birth Participant Demographics.** Although the main analyses of this research are focused on the post-birth questionnaire, missing data from participants' post-birth questionnaires was a potentially serious issue, and, as expected, many individuals did not complete the second questionnaire. On the post-birth questionnaire, 115 participants completed at least some portion of the questionnaire, though not all participants completed all portions of the questionnaire. The modal participant who completed the post-birth questionnaire was 30 years old (range = 15-46), had had no problems with her pregnancy (54.1% had no problems, 45.9% had problems), no problems with past pregnancies (65.9% had no problems, 29.4% had problems, 4.7% missing), no other children (54.1% no other children), 24.7% had 1 child, 14.1% had two children, 1.2% had three children, 2.4% had four or more children), had taken childbirth preparation classes (60.0% took classes, 36.5% no classes for this pregnancy, 3.5% missing; 35.3% had previously taken class,

58.8% had not), was married (83.5% married, 10.6% living with partner, 2.4% single, 1.2% engaged, 2.4% missing), Caucasian (85.9% Caucasian, 7.1% Hispanic/Latina, 2.4% Asian American, 2.4% "other, unspecified," 2.4% missing), had a college degree (4.7% some high school, 5.9% high school diploma, 3.5% technical/vocational school, 23.5% some college, 25.9% college degree, 10.6% some graduate school, 23.5% graduate degree), and had an average household income of \$61,000 to \$80,000 per year (9.4% under \$20k, 10.6% \$20k-\$40k, 22.4% \$41k-\$60k, 18.8% \$61k-\$80k, 14.1% \$81k-\$100k, 22.4% over \$101k, 2.4% missing). The modal participant for the post-birth questionnaire also had an obstetrician and her partner or the baby's father attend the birth (73.3% Obstetrician, 5.2% General Practitioner or other doctor, 69.8% Labor and Delivery Nurse, 25.9% Midwife, 13.8% Doula, 31.9% Relative or Friend, 91.4% Partner/Baby's Father). Measures included a pre-birth and a post-birth questionnaire. Scales common to both pre- and post-birth questionnaires included the Labour Agency Scale (Hodnett, 1989), Form C of the Multidimensional Health Locus of Control (Wallston, Kaplan, & Maides, 1976), the Center for Epidemiologic Studies Depression Scale (Radloff, 1977), and Erickson's Pregnancy Questionnaire (Erickson, 1967). Participants also answered demographic questions (i.e., age, ethnicity, household income) on the pre-birth questionnaire and birth-related questions (i.e., birth location, attendants, previous births, etc.) on both the pre- and post-birth questionnaire. The Labour Agency Scale (LAS; Hodnett, 1989) was used to assess perceptions of control in childbirth. The LAS is a 29-item rating scale specifically designed to measure personal control during childbirth (either expectations of or experiences of, depending on whether the scale is given pre- or post-birth). Psychometric testing has shown the reliability and validity of the LAS (Hodnett, 1989; Hodnett & Simmons-Tropea, 1987). As the LAS is a gross measurement of perceived control, a modified version of Form C of the Multidimensional Health Locus of Control scale (MHLC) also was used to assess beliefs of control through four subscales: Internal Control, Chance/Luck, Doctors/Medical Personnel, and Other (powerful) People (Wallston, Kaplan, & Maides, 1976). Form C of the MHLC is an 18-item, general-purpose measure designed to be modified for any medical or health-related condition or situation. It has been used for studies of control in populations with arthritis, chronic pain, diabetes, and cancer, for instance. Alpha reliabilities have been found to be consistently acceptable across these numerous situations (Wallston, Wallston, Stein, & Smith, 1994). Depression (both pre- and postpartum) was measured using the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977), a 20-item rating scale used to measure depressive mood in the general population. It has been validated in numerous studies over various populations and has been found to have high sensitivity in detecting depressive symptomatology and change in symptoms over time (Leathers, Kelley, & Richman, 1997). The final measure was a modified version of Erickson's Pregnancy Symptoms Questionnaire, which was used to assess physical/physiological symptoms both prior to and following childbirth. Participants were asked to indicate which symptoms, from a 31-item list, they had experienced in the last week (Padawer et al., 1988).

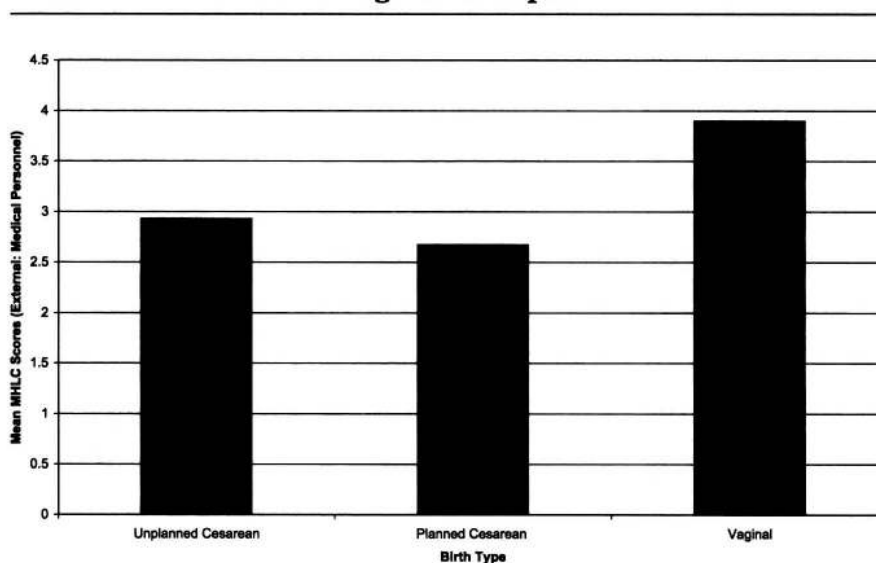
**RESULTS**

**Missing Data Analysis for Post-Birth Questionnaire** Those missing data on the post-birth questionnaire differed in some ways from those not missing the post-birth questionnaire. Significant differences were found for the number of weeks pregnant;  $t(89.41) = 2.79, p = .006$ , two-tailed. Those participants who completed both pre- and post-birth questionnaires were an average of 3.72 weeks further along in their pregnancies than those who did not complete the post-birth questionnaire. This is not troublesome as it is more a difference in time (e.g., how many weeks pregnant they were when they took the questionnaire) than in any innate characteristics of the participants. This was probably due to the cut-off point of the questionnaire; if the questionnaire had been available longer they probably would have been just as likely to complete the post-birth questionnaire as those who actually did. This points to the difficulty in collecting time-sensitive longitudinal data, especially when the timeline is different for all participants. Those missing the post-birth data were less likely to have reported problems with their current pregnancy ( $\chi^2(1) = 4.33, p = .05$ ), though there were no significant differences in rate of problems with past pregnancies. There were no differences on marital status, ethnicity, who they planned to have attend their birth, or whether or not they had taken childbirth classes. However, there

was a trend towards significant differences for household income ( $\chi^2(5) = 10.51, p = .06$ ) such that those reporting higher household income dropped out of the study at a lower rate than those reporting lower household income. This must be taken into account when interpreting results, as results are only reflective of the sample from which these results were drawn; results may not generalize, therefore, to a larger range of SES categories. There were no differences between those missing post-birth questionnaire and those not missing the post-birth questionnaire on scores on the Labour Agency Scale (LAS, measure of control in childbirth), depression scale (CES-D), or locus of control scale (MHLOC). However, those missing the post-birth questionnaire data had somewhat higher initial physiological symptom levels (as measured by Erickson's Pregnancy Questionnaire), on average, than those who completed both sections;  $t(121) = -1.97, p = .05$ . H1: Women who have lower levels of perceived control over their childbirth will experience more negative psychological and physiological symptoms postpartum than women who have higher levels of perceived control over their childbirth. This hypothesis was addressed through bivariate correlations between control measures (LAS and MHLC) and psychological (CES-D) and physiological (EPQ) measures. There was a significant correlation ( $r = .578, p < .01$ , one-tailed) between scores on the LAS and the CES-D: higher control in labor/childbirth (as measured by the LAS) was correlated with lower depression. The LAS also had a significant correlation with the EPQ; women with higher control scores on the LAS reported fewer negative physical symptoms. None of the correlations between CES-D and any of the subscales of the MHLC were significant, though, for the internal subscale, findings were in the expected direction (higher internal control associated with lower levels of depression). Interestingly, despite the lack of significance for CES-D and MHLC, all but the Medical Personnel subscale of the MHLC were significant in correlations with the EPQ. Internal was negatively correlated with EPQ ( $r = -.22, p = .05$ ; higher scores on Internal were associated with lesser physiological symptoms); Chance was significantly correlated with EPQ ( $r = -.26, p = .025$ ; higher scores on Chance were associated with fewer physiological symptoms); and Powerful Other People was significantly correlated with scores on the EPQ ( $r = .22, p = .057$ ; higher belief in Powerful Others having control was associated with higher levels of physiological symptoms). Overall, findings tended to be supportive of negative physical and psychological symptoms being more likely to be characteristic of those who scored lower on a sense of internal control. H2: Women who give birth vaginally will maintain higher levels of perceived control over their birth than women who give birth by Cesarean surgery (regardless of whether it is planned or unplanned). This hypothesis was addressed through t-tests comparing the vaginal group to the cesarean group in terms of control (as measured by the LAS and the MHLC). LAS scores for women who gave birth vaginally were significantly different from those of women who gave birth by cesarean ( $t(90) = -3.56, p < .001$ ); women who gave birth vaginally ( $M = 170.89$ ) reported greater perceived control than those who gave birth by cesarean ( $M = 135.14$ ). For the MHLC, the Internal ( $t(76) = 4.09, p < .001$ ) and the Medical Personnel ( $t(76) = 2.38, p = .02$ ) subscales showed significant differences between the two groups. As predicted, women who gave birth vaginally ( $M = 3.38$ ) scored higher in internal control than women who gave birth by cesarean ( $M = 2.21$ ). In addition, women who gave birth vaginally ( $M = 3.9$ ) also assigned more control to their doctors or other medical personnel than did women who gave birth by cesarean ( $M = 2.8$ ). In sum, the results support the hypothesis that vaginally-delivered women perceived greater control and also suggest that these women also tended to cede greater control to medical personnel. H3: Women who deliver vaginally will display lower levels of both physical and psychological (depression) symptoms postpartum as compared with women who deliver by cesarean. T-tests were used to analyze potential differences between women who delivered vaginally and women who delivered by cesarean in level of psychological (CES-D) and physiological (EPQ) postpartum symptoms. Though both of these tests failed to meet conventional levels of significance ( $t(88) = -.652, p = .516$ ;  $t(81) = -1.82, p = .073$  one-tailed for CES-D and EPQ, respectively), both effects were in the hypothesized direction, with EPQ scores nearing significance. Though not confirming of the hypothesis, results are suggestive of a true effect that may exist with regards to differential levels of postpartum physiological and psychological symptoms in women,

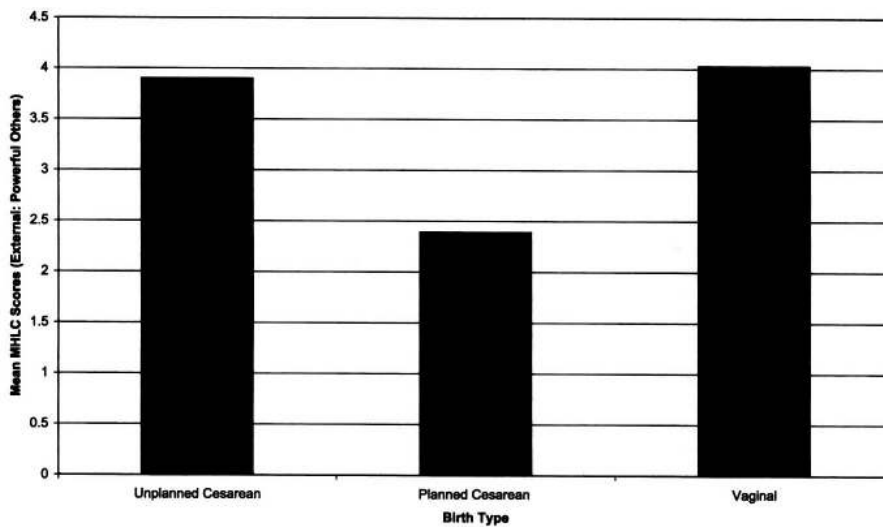
depending upon birth type. H4: Women who deliver vaginally will have the highest degree of perceived control, followed by scheduled cesarean and then unscheduled cesarean. ANOVAs were performed to examine differences between groups in perceptions of control. Partitioning the cesarean birth group into planned and unplanned cesareans was done to better capture the hypothesis that there would be greater differences found between the unplanned cesarean and the other two groups, than between any other combinations of groups. Significant differences were found for the LAS and birth type,  $F(2, 89) = 6.83, p = .002$ . A follow-up test (using Tukey's HSD) showed significant differences between unplanned ( $M = 144.12$ ) and vaginal ( $M = 170.89; p = .016$ ) and between planned ( $M = 126.15$ ) and vaginal ( $p = .021$ ), but not between planned and unplanned ( $p = .952$ ). The MHLC Internal subscale was found to produce significant differences between groups,  $F(2, 75) = 7.93, p < .001$ . Follow up tests using Tukey's HSD showed that the significant difference is between planned ( $M = 2.13$ ) and vaginal ( $M = 3.38; p = .007$ ; vaginal group has higher internal control) and between unplanned ( $M = 2.30$ ) and vaginal groups ( $M = 3.38; p = .016$ ; vaginal group has higher internal locus of control). These results are consistent with those found for the LAS. Between group differences on the other subscales of the MHLC also were found to be significant,  $F(2, 75) = 5.80, p = .005$ ;  $F(2, 75) = 5.26, p = .007$ ;  $F(2, 75) = 3.95, p = .023$  for External Chance, External Medical Personnel, and External Powerful Others, respectively. The planned cesarean group displayed lower levels of control for Medical Personnel and Powerful Others, but exhibited higher levels of belief in Chance controlling their childbirth.

**Figure 1**  
**Mean MHLC Scores (External: Medical Personnel) for**  
**Cesarean (Unplanned), Cesarean (Planned), and**  
**Vaginal Groups**



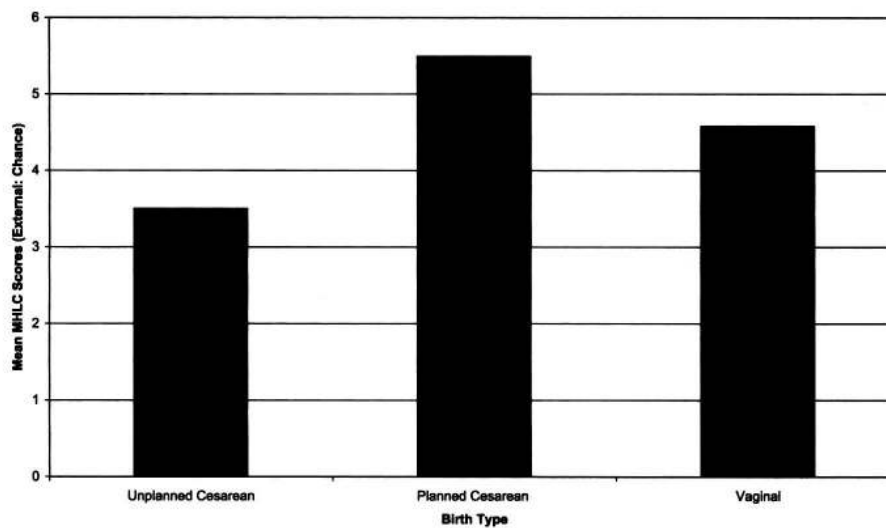
These results suggest a greater difference, for the most part, between cesarean, regardless of the type, and vaginal deliveries. H5: Vaginal birth will produce the least amounts of negative symptoms (postpartum depression and physiological symptoms), followed by increasing levels of negative symptoms (postpartum depression) for scheduled cesarean and unplanned cesarean (though no differences are hypothesized between planned and unplanned cesareans for physiological symptoms). Analysis of Variance (ANOVA) was used to examine this hypothesis. For CES-D, though no significant differences were found through the ANOVA,  $F(2, 87) = 1.15, p = .321$ , the mean group differences do show an interesting trend. This reveals the unexpected outcome of greater levels of depression for the planned cesarean group ( $M = 3.45$ ) than either the vaginal ( $M = 2.9$ ) or the unplanned cesarean group ( $M = 2.81$ ) (which are more similar to each other).

**Figure 2**  
**Mean MHLC Scores (External: Powerful Others) for Cesarean (Unplanned), Cesarean (Planned), and Vaginal Groups**



For the physiological symptoms, an ANOVA revealed no significant differences between the groups on the EPQ,  $F(2, 80) = 1.46$ ,  $p = .24$ . However, the means show that effects are in the anticipated direction, with greatest negative physical symptoms reported by the unplanned cesarean group, followed by the planned cesarean group, and then the vaginal group. DISCUSSION As can be seen from the results, there was at least partial support for many of the hypotheses, despite the pattern of missing data. Women with greater perceptions of control over their childbirth did experience less negative symptoms (both psychological as well as physiological) postpartum. It is intriguing, however, that this relationship also existed for women who perceived their doctor or other powerful person as being in control. This suggests that, as Burger (1989) and others have pointed out, having a perception of personal control is not always a positive thing. Although personal control is often seen to be highly desirable and positive (e.g., Thompson et al., 1993), it may be that certain situational or personality factors lead some individuals to desire not to control the situation. Whether this could function out of concerns for self-presentation, low expectancies of desired outcomes, or beliefs in low predictability (as Burger suggests are situational mediators of desire for control) has not been examined in this context, but may be productive avenues for continued research in the domain of childbirth and control. An alternative explanation, not wholly distinct from this, is that childbirth, through its tradition in medicalization, is not a situation in which women believe that they have a great deal of control. Women, especially those who opt for a societal-normative hospital delivery, may see themselves as patients with a medical condition who give themselves over to those who they believe know more and have greater ability in this situation, the obstetrician.

**Figure 3**  
**Mean MHLC Scores (External: Chance) for Cesarean (Unplanned), Cesarean (Planned), and Vaginal Groups**



The current socially-defined understanding of birth is a strange mixture of desiring personal control (as can be seen in the large numbers of women who take childbirth preparation classes, as well as in the smaller numbers lobbying for vaginal birth after cesarean, birthing center or home births, or other so-called "alternative" birthing strategies) and the ingrained understanding that this desire for personal control runs counter to society's belief in the power of technology (specifically, medical technology in this case, such as faith in the doctor, nurses, and other more specific technological innovations such as the fetal monitor). This explains some of the connections between more positive postpartum experiences and beliefs about control by both the self (internal) and powerful others (such as doctors) found in the current study. In addition to the connections found between control and outcomes, different relationships were found to exist depending on birth type. As predicted, women who birthed vaginally reported greater control on the LAS and greater internal control on the MHLC than women who had a cesarean birth. That the findings held true for two different conceptualizations of personal control is especially supportive of the hypothesis. ANOVAs designed to test for differences between vaginal and planned and unplanned cesareans revealed that women who gave birth vaginally had the highest ratings for personal control (as predicted), but that there was little difference between the planned and unplanned cesarean group (unexpected). The assumption implicit in the hypothesis was that women who were planning to have a cesarean would be more similar to the vaginal group due to the confirmation of expectancies (e.g., both women planning vaginal births and women planning cesarean births had their expectations for birth type, at least, confirmed) while women who experienced an unplanned cesarean would differ in that their expectations for a vaginal birth would not be realized. However, it is possible (as the data suggest) that other unique factors of cesarean and vaginal births are more predictive of perceptions of control than having the type of birth originally planned for (or, it may be that expectations are not necessarily fulfilled for the planned cesarean group; women may find themselves unprepared for emotional or other reactions, as previous research has found in terms of maternal satisfaction following cesarean birth). Researchers may wish to examine further the thoughts and feelings of women anticipating differing forms of birth and compare these to thoughts and feelings gathered after the births have occurred. A more qualitative analysis may reveal differences in planned cesarean and planned vaginal groups that were not captured by the current quantitative data techniques. In addition, it would be helpful to assess both the desire for and the value placed on perceptions of control in childbirth. Differences in reported



perceived control, desire for and valuing of perceived control, and relationships between levels of perceived control and psychological distress found in cross-cultural research (e.g., Chan, 1989, Sastry & Ross, 1998) suggests that the control-psychological outcomes relationship may not be as universally applicable as a simple application of Brown and Siegel's (1988) model may suggest. In sum, results were generally in support of hypotheses. It is important to recognize that this form of data collection (over the Internet) is still a new venue for research possibilities and there may be problems inherent with drawing a research sample from this population, in that individuals who (1) have internet access, and (2) take on-line surveys, may differ from the general population with which this research purports to concern itself. As is apparent from this particular piece of research, it is apparent that there may be less concern on the part of participants dropping out from a two-part online survey than if the survey were done, for instance, face-to-face. It may be difficult to establish the researcher-participant relationship that can be exercised in traditional experimentation procedures, thus reducing the motivation for participants to elect to stay in the study. Another noteworthy feature of this research is the quasi-experimental nature of the design; participants were not randomly selected either from the population at large, nor were they randomly assigned to conditions (the researcher had no control over whether a given participant had, for example, a cesarean birth). As Cook and Campbell (1979) pointed out, the threats to validity inherent in quasiexperimental designs are numerous, and it is up to the researcher to be explicit and as evenhanded as possible in interpreting results. With that in mind, the caveat is once again given that these results may not apply to the general population of mothers and that causal relationships are not intrinsic to the correlational relationships found here (though one may be hard-pressed to predict perceived control causing different types of birth!). As can be seen from the many questions remaining, this area of research is open to additional inquiry, from more population-based studies, to qualitative studies, as well as to studies of differences between cultural groups. It remains evident, however, that the impact of control in issues surrounding childbirth is an important theoretical question to examine, especially given the differential impact on women's physiological and psychological recovery processes after birth. The objective remains, then, to come to a better understanding of the antecedents and consequences that may ultimately influence the ways in which women are prepared for and cared for before, during, and after childbirth.

References

Annandale, E (1987). Dimensions of patient control in a free-standing birth center. *Social Science and Medicine*, 25, 1235-1248.

Bandura, A (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84, 191-215.

Brewin, C & Bradley, C (1982). Perceived Control and the experience of childbirth. *British Journal of Clinical Psychology*, 21, 263-269.

Brown, J & Siegel, J (1988). Attributions for negative life events and depression: The role of perceived control. *Journal of Personality and Social Psychology*, 54, 316-322.

Burger, J (1989). Negative reactions to increases in perceived personal control. *Journal of Personality and Social Psychology*, 56, 246-256.

Campero, L, Garcia, C, Diaz, C, Ortiz, O, Reynoso, S, & Langer, A (1998). "Alone, I wouldn't have known what to do." A qualitative study on social support during labor and delivery in Mexico. *Social Science and Medicine*, 47, 395-403.

Chan, D (1989). Dimensionality and adjustment correlates of locus of control among Hong Kong Chinese. *Journal of Personality*, 53, 145-160.

Connor, B (1977). Teaching about cesarean birth in traditional childbirth classes. *Birth and the Family Journal*, 4, 107-113.

Cook, T & Campbell, D (1979). *Quasi-experimentation: Design and analysis issues for field settings*. Chicago: Rand McNally College Publishing Company.

DiMatteo, M, Morton, S, Lepper, H, Damush, T, Carney, M, Pearson, M, & Kahn, K (1996). Cesarean childbirth and the psychosocial outcomes: A meta-analysis. *Health Psychology*, 15, 303-314.

Edwards, D, Porter, S, & Stein, G (1994). A pilot study of postnatal depression following cesarean section using two retrospective self-rating instruments. *Journal of Psychosomatic Research*, 38, 111-117.

Erickson, M (1967). Method for frequent assessment of symptomology during pregnancy. *Psychological Reports*, 20, 447-450.

Glass, D & Singer, J (1972). *Urban Stress: Experiments on Noise and Social Stressors*. New York: Academic Press.

Gottlieb, S & Barrett, D (1986). Effects of unanticipated cesarean section on mothers, infants, and their interaction in the first month of life. *Journal of Developmental and Behavioral Pediatrics*, 7, 180-185.

Greene, P,

Zeichner, A, Roberts, N, Callahan, E, &Granados, J (1989). Preparation for cesarean delivery: A multicomponent analysis of treatment outcome. *Journal of Consulting and Clinical Psychology*, 57, 484-487.

Hillan, E (1992). Short-term morbidity associated with cesarean delivery. *Birth*, 19, 190-194.

Hodnett, E (1989). Personal control and the birth environment: Comparisons between home and hospital settings. *Journal of Environmental Psychology*, 9, 207-216.

Hodnett, E &Simmons-Tropea, D (1987). The Labour Agency Scale: Psychometric properties of an instrument measuring control during childbirth. *Research in Nursing and Health*, 10, 301-310.

Humenick, S (1981). Mastery: The key to childbirth satisfaction? A Review. *Birth and the Family Journal*, 8, 79-83.

Hwang, C (1987). Cesarean childbirth in Sweden: Effects on the mother and father-infant relationship. *Infant Mental Health Journal*, 8, 91-99.

Leathers, S, Kelley, M, &Richman, J (1997). Postpartum depressive symptomatology in new mothers and fathers: Parenting, work, and support. *The Journal of Nervous and Mental Disease*, 185, 129-139.

Manning, M &Wright, T (1983). Self-efficacy expectancies, outcome expectancies, and the persistence of pain control in childbirth. *Journal of Personality and Social Psychology*, 45, 421-431.

Martin, J, Hamilton, B, Sutton, P, Ventura, S, Menacker, F, &Munson, M (2003). Births: Final Data for 2002. (National Vital Statistics Reports, 52 [21O]), Hyattsville, Maryland: National Center for Health Statistics, U.S. Department of Health and Human Services.

Matthews, A &Ridgeway, V (1981). Personality and surgical recovery: A review. *British Journal of Clinical Psychology*, 20, 243, 260.

Mutryn, C (1993). Psychosocial impact of cesarean section on the family: A literature review. *Social Science and Medicine*, 37, 1271-1281.

Oakley, A (1983). Social consequences of obstetric technology: The importance of measuring "soft" outcomes. *Birth*, 10, 99-108.

Orbell, S, Johnston, M, Rowley, D, Espley, A, &Davey, P (1998). Cognitive representations of illness and functional and affective adjustment following surgery for osteoarthritis. *Social Science and Medicine*, 47, 93-102.

Padawer, J, Pagan, C, Janoff-Bulman, R, Strickland, B, &Chorowski, M (1988). Women's psychological adjustment following emergency cesarean versus vaginal delivery. *Psychology of Women Quarterly*, 12, 25-34.

Pederson, F, Zaslow, M, Cain, R, &Anderson, B (1981). Cesarean childbirth: Psychological implications for mothers and fathers. *Infant Mental Health Journal*, 2, 257-263.

Radloff, L (1977). The CES-D Scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement*, 1, 385-401.

Ridgeway, V &Matthews, A (1982). Psychological preparation for surgery: A comparison of methods. *British Journal of Clinical Psychology*, 21, 271-280.

Ryding, E, Wijma, K, &Wijma, B (1998). Psychological impact of emergency cesarean section in comparison with elective cesarean section, instrumental and normal vaginal delivery. *Journal of Psychosomatic Obstetrics and Gynaecology*, 19, 135-144.

Sastry, J &Ross, C (1998). Asian ethnicity and the sense of personal control. *Social Psychology Quarterly*, 61, 101-120.

Shearer, E (1989). Commentary: Does cesarean delivery affect the parents? *Birth*, 15, 57-58.

Scott-Palmer, J &Skevington, S (1981). Pain during childbirth and menstruation: A study of locus of control. *Journal of Psychosomatic Research*, 25, 151-155.

Skinner, E (1996). A guide to constructs of control. *Journal of Personality and Social Psychology*, 71, 549-570.

Taylor, S &Brown, J (1988). Illusion and well-being: A social psychological perspective on mental health. *Psychological Bulletin*, 103, 193-210.

Thompson, S, Sobolew-Shubin, A, Galbraith, M, Schwankovsky, L, &Cruzen, D (1993). Maintaining perceptions of control: Finding perceived control in low-control circumstances. *Journal of Personality and Social Psychology*, 64, 293-304.

Trowel, J (1982). Possible effects of emergency cesarean section on mother-child relationship. *Early Human Development*, 7, 41-51.

Tulman, L &Fawcett, J (1988). Return of functional ability after childbirth. *Nursing Research*, 37, 77-81.

Tulman, L &Fawcett, J (1991). Recovery from childbirth: Looking back six months after delivery. *Health Care for Women International*, 12, 341-350.

Wertz, R &Wertz, D (1989). *Lying-in: A History of Childbirth in America*. New Haven: Yale University Press.

Wallston, K, Stein, M, &Smith, C (1994). Form C of the MHLC Scales: A conditionspecific measure of locus of control. *Journal of Personality Assessment*, 63, 534-553.

Wallston, B, Wallston, K, Kaplan, G, &Maides, S (1976). Development and validation of the Health Locus of Control (HLC) Scale. *Journal of Consulting and Clinical Psychology*, 44, 580-585.

Wideman, M &Singer, J (1984). The role of psychological mechanisms in preparation for childbirth. *American Psychologist*, 39, 1357-

1371. AuthorAffiliation Jennifer Gray, MA, is a Ph.D. Graduate Student, Claremont Graduate University.  
Correspondence through: Psychology Department, Westmont College, 955 La Paz Road, Santa Barbara,  
California 93108jennifer.gray@cgu.edu

**Publication title:** Journal of Prenatal&Perinatal Psychology&Health

**Volume:** 19

**Issue:** 3

**Pages:** 251-267

**Number of pages:** 17

**Publication year:** 2005

**Publication date:** Spring 2005

**Year:** 2005

**Publisher:** Association for Pre&Perinatal Psychology and Health

**Place of publication:** Forestville

**Country of publication:** United States

**Journal subject:** Medical Sciences--Obstetrics And Gynecology, Psychology, Birth Control

**ISSN:** 10978003

**Source type:** Scholarly Journals

**Language of publication:** English

**Document type:** General Information

**ProQuest document ID:** 198726486

**Document URL:** <http://search.proquest.com/docview/198726486?accountid=36557>

**Copyright:** Copyright Association for Pre&Perinatal Psychology and Health Spring 2005

**Last updated:** 2010-06-06

**Database:** ProQuest Public Health

---

**Contact ProQuest**

Copyright © 2012 ProQuest LLC. All rights reserved. - [Terms and Conditions](#)