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THE USE OF IMAGERY AND ITS RELATIONSHIP TO MATERNAL ADAPTATION: A COMPARISON OF CESAREAN VERSUS VAGINAL DELIVERIES

A Master's Thesis Presented

By

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CHAPTER I

INTRODUCTION

Victor Frankl, in Man's Search for Meaning (1963), described the experience of being held captive in World War II concentration camps. He credited his survival to his ability to visualize himself out of the camp, reunited with his wife, writing the manuscript of a lifetime. While Frankl labeled this coping strategy the existential search for life's meaning, it could variously be termed the ability to image; Frankl created a vivid internal fantasy that served to counterbalance the deleterious effects of his external reality.

The spontaneous production of imagery may be one of the least recognized strategies for coping with stressful life events. This oversight is surprising, for in recent years numerous other virtues of imagery have been extolled by clinicians and scientists alike. Across psychological disciplines, clinicians employ imagery techniques to facilitate diagnosis, aid in understanding, and abet change (Sheikh & Panagiotou, 1975). Images have also been used to induce mood change in depressed and anxious subjects (Driscoll, 1976; Jarvinen & Gold, 1981; Richardson & Taylor, 1982; Schultz, 1978).

Coping images enhance physical as well as psychological well-being. Bresler and Trubo (1979) have documented the successful use of imagery to combat pain; Remer, Watson, and Brinley (1978) to increase physical tolerance; and Simonton and Simonton (1978) to facilitate healing. Imagery has also been applied to women in labor to help reduce pain and increase the ability to tolerate discomfort

(Horan, 1973).

When evaluated systematically, the relationship between imagery and coping has largely been addressed through the use of experimenter-induced images in laboratory settings, rather than through the spontaneous use of self-generated images in a stressful, naturalistic setting. Typically, experimenters present subjects with a laboratory analog of stress (i.e., hand immersion in ice-cold water) and instructions to visualize a variety of images. Dependent measures of physiological or psychological change are then systematically assessed for their relationship to the experimental imagery manipulation. While analog studies provide adequate controls over numerous confounding variables inherent in field research, their generalizability to naturalistic settings remains open to question. Similarly, the induction of coping imagery may be a useful tool for those who seek treatment, but its benefits may elude the majority of people who undergo stress without treatment.

Childbirth presents an ideal naturalistic setting for the systematic evaluation of the spontaneous use of imagery under stress, as it occurs frequently and entails both psychological and physiological stress. It seems reasonable to assume that women employ coping strategies to help them deal with the stress of childbirth, yet an exploratory study to determine whether women generate imagery as a coping mechanism has never been done. And it is not known whether the use of self-generated imagery is effective as a coping strategy. Do women who image fare better than women who do not on measures of psychological and physical well-being, such as anxiety, depression,

confidence in mothering, and physical symptoms? Several authors allude anecdotally to the importance of fantasy during pregnancy, but do not systematically evaluate the relationship between the use of fantasy and other measures of physical and psychological well-being (Pines, 1972; Rubin, 1972).

The literature on childbirth per se suggests that delivery mode may differentially affect a woman's psychological well-being in the immediate postpartum period, yet few controlled studies demonstrate that empirically. Concomitant with a dramatic increase in the number of cesarean deliveries in the last ten years has been a growing public concern about the possible emotional effects of cesarean delivery on the mother (Cohen & Estner, 1983). The question of whether, in a controlled study, cesarean delivery negatively influences a woman's psychological well-being remains open to further study. Only one well-designed project addressed this question systematically, finding no differences between cesarean and vaginal deliveries in terms of their impact on maternal adjustment (Bradley, Ross, & Warnyca, 1983).

In addition, it is not known whether women who deliver by cesarean differ in their use of imagery from women who deliver vaginally. The intensity or type of a stressor may be related to type of imagery used spontaneously.

The study described here was designed to explore these questions systematically. This chapter includes reviews of three relevant bodiesof literature covering: 1) the clinical and experimental uses of imagery in psychology and medicine; 2) the use of fantasy during childbirth; and 3) the differential effects of delivery mode on

maternal psychological well-being.

The Therapeutic Use of Imagery

Imagery takes many forms and serves many purposes, but this review will cover only the literature on imagination imagery, as it is the type of imagery most often associated with improved psychological and physical functioning. Used synonymously with fantasy and daydreams, imagination imagery involves sensations such as seeing, hearing, or feeling, but is distinguished from thoughts. Richardson (1969) defines imagery as a form of "quasi-sensory perception" which occurs in the absence of the actual sensory stimulus. The following sections provide an overview of the therapeutic use of imagery to affect psychophysiological change, both from a clinical and an experimental perspective.

Clinical Applications of Imagery

Psychotherapy. In the early 1900s, with their emphasis on unconscious processes, both Carl Jung and Sigmund Freud played a part in elevating imagery to a place of respectability in the psychological community. Later, the rise of behaviorists such as Watson, who valued only observable, measurable phenomena, helped demote imagery to the lowest ranks of scientific inquiry. It was not until the 1960s that a resurgence of interest in imagery occurred, paradoxically enough within behavior therapy.

Currently, the therapeutic use of imagery spans a wide range of clinical disciplines, from psychoanalysis to cognitive-behavior

therapy. The understanding and application of imagery varies across disciplines, but some common goals unite the groups. According to Shiekh and Panagiotou's (1975, p. 579) critical review of the use of imagery in psychotherapy, all clinicians who use imagery, regardless of their theoretical background, attempt to achieve one or more of the following goals: (a) gaining information which includes diagnosis; (b) establishing empathic understanding; (c) releasing emotional experience and progressively working through the emotionally charged content; (d) transforming either emotions or ideas or behavior.

Psychoanalysts consider imagery a direct route to the unconscious and/or expression of unconscious impulses. For the analyst, imagery serves primarily to enhance understanding through the patient's unconscious imaginal expression.

Several schools of therapy have expanded this notion and developed therapeutic techniques primarily based on imagery. In Ahsen's (1968) eidetic therapy, images, not words, are considered the medium of analysis. He claims most success with psychosomatic patients, eliciting first an affect-laden image which symbolizes the beginnings of the symptom and then expanding or revising the image through repetition so that a reworking of the original trauma can occur imaginally.

In Desoille's (1965) "directed daydream" therapy, the patient is directed to relax and engage in a daydream stimulated by an image the clinician has presented, such as a sword (symbolizing manhood) or a vessel (symbolizing womanhood). Through these directed daydreams, Desoille hypothesizes that the patient is led to face a variety of

life situations and his or her habitual responses (both affective and behavioral). In the course of treatment, the patient learns new responses on an imaginal level and then is trained to shift from imaginary change to behavioral change.

Leuner (1969) developed the therapeutic technique of "guided affective imagery," which also entails the clinician inducing imagery in the patient, who is asked to expand upon the image affectively. The expanded image reveals underlying problem areas, which can be therapeutically altered imaginally.

Despite the widespread application of imagery techniques in psychotherapy, the behavior therapist perhaps deserves the most credit for pushing imagery into the public consciousness again. Behaviorists employ imagery as an integral part of systematic desensitization and flooding, when in vivo presentation of feared stimuli are impractical or impossible. Wolpe (1961) is commonly credited wih the anxiety-reducing technique of systematic desensitization. Phobic patients are asked to imagine a sequence of the feared stimuli, presented hierarchically so that the least fearful precede the most fearful. Simultaneously, deep-muscle relaxation is taught, a behavior thought to be incompatible with anxiety. The patient learns a new affective response to the imagined feared stimuli, which transfers to the actual stimuli. Pleasant images may also be induced to facilitate relaxation.

Lazarus and Abramovitz (1962) varied systematic desensitization for use with children who might have difficulty learning muscle relaxation. In what he termed "emotive imagery," Lazarus pairs images

which evoke pleasant emotions with feared images. The two are interwoven, in the belief that the pleasant-affective image (like relaxation) will be incompatible with the usual anxiety response to the feared image. The affect associated with the pleasant image will counteract the anxiety of the feared image.

Social learning theorists such as Bandura (1971) advocate the use of imagery in covert (or symbolic) modeling, where a role is taken and rehearsed imaginally to facilitate learning.

As a cognitive therapist, Beck (1970) believes that images can be used to help a patient understand the irrationality of their current affective/behavioral responses. Cognitive restructuring can occur through the repetition of images with corresponding changes of affect and behavior.

Medicine. The therapeutic use of imagery in medicine (to reduce pain, facilitate healing, and improve compliance) has been suggested through numerous case illustrations. Controlled experimental studies evaluating the benefits of imagery in the treatment of medical problems will be discussed in a subsequent section.

Perhaps the best known proponents of the healing qualities of imagery are the Simontons (Simonton & Simonton, 1978). In one imagery technique used by the Simontons, adult terminal cancer patients visualize their malignancy as a lone wolf and the white blood cells as a group of huskies attacking it. Simonton (1975) reported survival rates for sixty cancer patients treated in part with imagery. The average length of suvival was twenty months, twice as long as the ten-month national norm for patients with similar diagnoses. Work in

this area is based on the premise that there exists a link between psychological stress and the immune system, which imagery mitigates.

Korn (1983) describes the application of imagery techniques to enhance physical rehabilitation and reduce chronic pain in a medical setting. The images, induced by the clinician, are specific to the treatment needs of the individual. Treatment to reduce pain may include relation images of floating on clouds or water. Images to help relearn motor skills may include previously learned skills or apt metaphors for the new skill. For example, one man who was unable to sit subsequent to a cerebral vascular accident relearned sitting balance by imagining his body as a series of building blocks, which he stacked one upon the other. Another woman relearned motor skills on one side of her body by picturing herself as a marionette, with the good side manipulating the strings of the nonfunctional side.

In an example of spontaneous imagery generated to cope with pain, one paraplegic woman about to undergo physical therapy was observed staring into the corner of a room. "When asked what she was doing, she remarked that she was placing her pain in the corner of the room so that she could undergo her therapy without hindrance from pain." (Korn, 1983, p. 28).

Much work has been done with children in this area, perhaps because of their readiness to engage in fantasy. In the treatment of children with malignancies, a combination of relaxation and mental imagery (RMI) was applied with the goals of increasing the efficacy of the immune system (and thereby decreasing mortality and morbidity), reducing pain and increasing tolerance of medical-surgical therapies

(Hall, 1983). Case illustrations provide optimism for further work, although no comparative data are presented.

A group of pediatricians (Kohen, Olness, Colwell, & Heimel, 1984) reported the successful use of RMI in the treatment of over five hundred children and adolescents who presented with a variety of problems such as enuresis, asthma, habit disorders, and anxiety. According to the authors, over 83% of 505 patients demonstrated more than 50% improvement, and 51% showed complete resolution of their problem. Data included long-term follow-up over a two-year period, but the report left many questions unanswered, such as the rate of improvement that could be expected without RMI, with traditional treatment, or with spontaneous remission.

One illustrative case example of the utilization of emotive imagery technique with a ten-year-old burn victim was described by Weinstein (1976). The boy suffered from second and third degree burns over 70% of his body and had developed a fear of and an uncontrolled screaming and hitting response to bathing. This is apparently common in burn patients, due to the pain and anticipatory anxiety of immersion in water. The clinician instructed the patient to visualize scenes which elicited a positive emotional response. The therapist then began desensitization training, combining relaxation and positive emotive imagery. After two sessions, the water phobia response was extinguished and remained so at one-year follow-up. The author understands the treatment success as enabling the client to acquire a coping response which is incompatible with anxiety, thereby improving his ability to undergo painful but medically necessary treatment.

In sum, the preceding case examples suggest the potential efficacy of imagery in the enhancement of coping in a variety of medical problems. However, due to their uncontrolled nature, they leave room for many alternative explanations. None of the preceding case examples used a single-subject design to evaluate treatment efficacy. No control groups were used, making generalization impossible. In addition, the clinical application of imagery is often confounded by other treatments such as relaxation or pharmacotherapy.

Experimental Use of Imagery

Psychological. The clinical literature indicates a relationship between imagery and affect. The experimental literature has attempted to demonstrate that relationship systematically, particularly in the areas of depression and anxiety.

According to cognitive behaviorists, depression is characterized by negative self-statements and negative evaluations of both internal and external events, including rehearsing imaginally the worst possible outcome. According to Jarvinen and Gold (1981), "Increasing adaptive responses in depressed individuals requires replacing those negative internal processes with a more positive style. A realistic appraisal of situations, replacement of negative thoughts by positive images, and training in the use of imagery to decrease boredom and stop negative thinking are important modes of cognitive intervention to deal with depressed individuals" (p. 523).

Jarvinen and Gold (1981) demonstrated a significant treatment effect for the use of positive and neutral images in the reduction

of depression. Fifty-three subjects were selected from a pool of three hundred and fifty, on the basis of high scores on the Beck Depression Inventory (BDI) and assigned to one of four groups, three imagery treatment groups and one nontreatment control. After three weekly meetings and instructions to image daily, the BDI was readministered. Subjects given imagery treatment evidenced significant decreases in depression, with the control group not changing significantly. Type of imagery did not influence level of depression. Although results were not maintained at six-month follow-up and the number of subjects in each group was small, this study suggests that imagery (both positive and neutral) is effective in reducing depression on a short-term basis.

Earlier, Schultz (1978) had demonstrated reductions in depression in severely depressed male inpatients with the use of imagery. He induced positive imagery in subjects over a ten minute session. Like Jarvinen and Gold (1981), the decrease in depression was short-term, suggesting that further work on the maintenance of treatment effects is needed.

In a replication of their earlier study, Gold, Jarvinen, and Teague (1982) failed to show significant treatment effects for imagery techniques. Two positive imagery groups and the no-treatment control group all reported less posttreatment depression on the BDI. Therefore, no conclusions could be drawn as to the efficacy of imagery. Once again, the number of subjects in each group was small (approximately 10), making definitive conclusions difficult.

Richardson and Taylor (1982) induced mood change in four groups

of eleven subjects each; vivid imagery/elated, vivid imagery/depressed, weak imagery/elated, and weak imagery/depressed. A reduction in the mood of elated subjects was achieved through the induction of depressing emotive imagery, with vivid imagers evidencing more mood change than weak imagers. The depressed subjects achieved an elevation of mood through the induction of positive elated emotive imagery, although not differentially based on vividness of imagery. One problem with this study is the lack of a no-treatment control, to rule out the effects of experimental demand. No follow-up was conducted.

The reduction of anxiety through the use of imagery has been experimentally studied by Driscoll (1976). He evaluated the efficacy of physical exertion and/or positive images by two component control groups, one minimal treatment group, a taped desensitization group, and a no-treatment control group. Each contained sixteen subjects, self-selected on the basis of high test anxiety, as measured by self-report. Driscoll found the combination treatment to be as effective as desensitization in reducing anxiety and significantly more effective than no treatment. The positive imagery alone treatment also effected improvements in anxiety level, although not as high as the combined exertion and imagery group or taped desensitization. This well-designed and well-executed study provides empirical support for the clinical use of imagery to reduce anxiety.

Bennett, Hall, and Guay (1980) combined imagery with relaxation training and practice examinations to evaluate the reduction of test anxiety on four undergraduate high-anxiety volunteers. Their anxiety self-report subsequent to final examinations indicated positive

results, although numerous methodological problems, such as the small sample and lack of control group, confound that finding.

In sum, while some empirical evidence suggests the efficacy of imagery techniques in altering mood states, others fail to demonstrate that relationship conclusively. The use of imagery is often confounded with other treatments or not compared systematically to appropriate control groups. In addition, the numbers of subjects are often small. Further research is needed with larger numbers of subjects and appropriate control groups.

Physiological. Numerous investigations have documented the ability of imagery to alter physiological responding. In addition, images which evoke affect have been found to produce greater magnitudes of physiological change (Schwartz, Fair, Salt, Mandel, & Klerman, 1976), suggesting that emotive imagery can affect physical changes. This has direct implications for the treatment of physical problems with imagery.

Differential physiological responses to imagery have been experimentally evidenced by Schwartz et al. (1976). When subjects were instructed to generate happy, sad, and angry imagery, discrete patterns of facial activity were detected, using electromyographic (EMG) procedures. Twelve depressed subjects were compared to twelve matched normals on their EMG responses to imagery conditions. The results indicated that physiological EMG responses could reliably differentiate subjects who were generating happy, sad, or angry images, even when no differences were apparent overtly. In addition, when subjects were instructed to reproduce the affective state in conjunction with the

image, the magnitude of EMG differences was greater. This well-designed study provides evidence for differential physiological responses subsequent to emotive imagery.

In a similar vein, Jones and Johnson (1980) evaluated the effect of imagery valence and activity level on heart rate. They demonstrated that internally generated images were capable of eliciting autonomic nervous system responses. Thirty-two undergraduate female subjects were presented with four different imagery conditions. Cardiac response was recorded during imaging, with high activity images generating larger heart rate responses than low activity images. There was an interaction between valence of imagery and activity level, with the lowest heart rate response associated with positive-low activity images.

Haney and Euse (1976) monitored heart rate (HR) and skin conductance (SC) of fifty-seven undergraduates administered a hierarchy of neutral, positive, and negative images. Both heart rate and skin conductance reactivity increased with negative images. Positive images stimulated SC responses comparable to negative images, but differed from negative images in generating less HR activity.

Medical implications. The evidence of physiological response to imagery conditions has direct implications for the application of imagery to physical problems. Crowther (1981) compared the effectiveness of three treatments in thirty-four patients with essential hypertension: 1) stress management training plus relaxation imagery, 2) relaxation imagery alone, and 3) weekly blood pressure tests. Both treatment groups involving imagery were significantly more effective

than blood pressure checks in reducing systolic and diastolic blood pressures during treatment and follow-up. The treatments did not differ from one another, indicating that the imagery component alone (of stress-management plus imagery) was sufficient to reduce blood pressure in patients with hypertension. The treatments obtained clinical as well as statistical significance, with eighteen of the twenty-four subjects in the two imagery treatment groups achieving normal blood pressure levels, which only one of the control group subjects obtained.

The efficacy of two imagery treatments compared to a placebo control in the treatment of migraine headaches and the management of laboratory-induced pain was examined by Brown (1984). The imagery treatments differed on the basis of response or stimulus properties of the images. Results demonstrated the superiority of both imagery conditions over the placebo control group on measures of experimentally-induced (cold-pressor) pain and headache activity. The treatments did not significantly differ from one another, and the effects were maintained at two-month follow-up. The author conceptualized the efficacy of the imagery treatments within a framework of cognitive coping strategies. The subjects were asked to replace their habitual responses to pain with more effective coping strategies.

Tasto and Chesney (1974) found relaxation imagery an effective mechanism in the treatment of primary dysmenorrhea. Seven females suffering from primary dysmenorrhea were trained in a combination muscle relaxation and imagery associated with menstrual pain reduction. The investigators were behaviorally oriented and attempted to

demonstrate that after learning to associate relaxation with menstrual pain reducing images, that learning could be transferred to actual menstrual pain. They felt their results demonstrated the effectiveness of behavior therapy techniques (relaxation and imagery) in treating primary dysmenorrhea, as significant differences in the direction of reduced pain after treatment were observed. However, these results must be observed with caution as the number of subjects was small and no comparison group was used.

Philips and Hunter (1981) selected sixteen patients on the basis of severe and chronic tension headache (without muscular abnormality) and assigned them to one of two treatment groups: relaxation training or relaxation plus calming imagery. Posttreatment measures of headache duration, intensity, and frequency indicated significant decreases for both treatment groups. While the groups did not differ significantly, the imagery and relaxation group evidenced a trend toward greater improvement. Again, the sample was small, no control groups were used, and the efficacy of imagery alone cannot be evaluated.

In sum, the well-documented physiological responses to varied imagery treatments suggest the potential efficacy of imagery in the treatment of physical problems. While experimental work has been done in this area, it generally suffers from methodological problems. Often imagery is not used alone, but in combination with another treatment, particularly relaxation. This confounds the appraisal of imagery. Further studies using component controls are needed to evaluate the effectiveness of imagery alone and imagery compared to

other treatments. In some cases, no control group has been used. The success that has been claimed must be tempered, as it is not known whether the effects achieved were due to spontaneous remission, placebo-affect, or experimenter demand. Nevertheless, enough pioneering work has been done to lay the groundwork for solid empirical evidence of the utility of imagery in the treatment of physical problems.

Imagery During Labor and Delivery

The process of childbirth, while hopefully culminating in the joy of a healthy newborn, nevertheless entails a good deal of pain and anticipatory anxiety. Some research has addressed the question of the efficacy of imagery in reducing the pain and anxiety of labor and delivery, primarily from the perspective of the cognitive-behaviorists, who employ imagery techniques as a cognitive coping strategy.

Horan (1973), a behaviorist, spontaneously used calming, pleasant imagery in an effort to reduce his wife's labor pains. His success with her stimulated him to empirically assess the use of imagery to help people cope with "inescapable discomforting situations." He termed his technique "*in vivo* emotive imagery" because it utilized the same principles of Lazarus' emotive imagery (pairing images which evoke pleasant emotions with anxiety-provoking events). Unlike Lazarus, "the tension-producing stimuli occur in real life rather than in imagination and simultaneous with rather than intermittently woven into the positive fantasy" (p. 217).

In one study, Wescott and Horan (1977) evaluated the differential effects of neutral, pleasant, and anger-invoking images on tolerance of pain. Three imagery groups of twenty subjects each were compared to a no-treatment control group in ability to tolerate cold-pressor pain. While imagery treatments were not significant for males, females responded to anger-emotive imagery by tolerating pain significantly longer than the no-treatment control group. The other two imagery treatments both approached significance for females but not males, suggesting that emotive imagery, particularly anger-emotive imagery, may be a more useful pain coping strategy for women than for men.

In an attempt to evaluate the effective components of the Lamaze childbirth technique and the relative efficacy of *in vivo* emotive imagery on the reduction of pain, Stone, Demchik-Stone, and Horan (1977) randomly assigned seventy female subjects to one of seven treatment conditions involving elements of the Lamaze method, imagery, placebo treatment, or a no-treatment control. The subjects were stratified on pretreatment assessments of cold-pressor pain tolerance and randomly assigned to treatments, with posttesting immediately following. The imagery technique was found to be more effective than the Lamaze focal point visualization technique in increasing cold-pressor pain tolerance. The results of this study imply that *in vivo* emotive imagery may be a more useful tool than the Lamaze technique in coping with the pain of labor and delivery.

A recent study by Geden, Beck, Hauge, and Pohlman (1984) exposed nulliparous females to a laboratory analog of pain designed

to simulate labor pains. Five cognitive-behavioral pain coping strategies including relaxation training, pleasant imagery, neutral imagery, and sensory transformation were evaluated alone or in combination. In total, one hundred women were assigned to one of ten groups. Dependent variables included self-reported pain and various physiological indices such as heart rate and blood pressure. The only cognitive-behavioral treatment that significantly influenced self-reported pain was the sensory transformation technique. This treatment condition involved a form of imagery which transformed the painful sensations into pleasant ones through imagination. However, none of the treatments compared favorably to a no-treatment control on physiological measures. Their findings contradict the previous research by Chaves and Barber (1974) which found pleasant imagery to be an effective technique for reducing pain, although this study differed in the duration of pain, presenting it at longer and repeated intervals. The authors contend that the sensory transformation technique may have longer lasting beneficial effects than pleasant imagery and, therefore, be more appropriate for labor and delivery pain reduction.

All of these studies share a common problem: Can cold-pressor pain experienced by volunteers in a laboratory setting be considered comparable to the ongoing, intense, inescapable pain of childbirth? The lack of research in the naturalistic setting is surprising. Only one study (Geden et al., 1984) even made an attempt to simulate labor conditions through the periodic presentation of pain over time.

In a critical review of the literature on preparation for child-

birth and contemporary research on pain, anxiety, and stress reduction, Beck and Siegel (1980) cite the paucity of research in this area. Despite copious research in other areas of psychosomatic medicine, prepared childbirth has been largely neglected in terms of empirical study. They conclude that labor is a valid and desirable subject of study for researchers interested in cognitive, behavioral, or psychophysiological manifestations of pain, anxiety, and stress.

Fantasies During Pregnancy

The literature on fantasy during pregnancy is sparse; what little does exist is culled from the clinical observations of obstetrical nurses or psychoanalytic theorists. Despite their varied backgrounds, writers in this area agree that fantasy during pregnancy occurs normally and may play a positive role in maternal adaptation (Deutsch, 1945; Rubin, 1972). However, a number of authors imply that problems in adaptation to motherhood may occur when fantasies fail to be integrated with reality (Pines, 1972), or express unresolved conflicts in the mother (Benedek, 1970; Deutsch, 1945). Few studies have attempted to address those questions empirically. The available literature will be reviewed and critiqued here.

Theory

The psychoanalytic community concerned with the psychology of women first addressed the importance of pregnancy fantasies. This community held that pregnancy formed an essential part of the normal female development cycle and fantasies were a normal part of preg-

nancy. Deutsch (1945) considered fantasies to be an integral part of the "turning inward" process of pregnancy. For Deutsch, turning inward through fantasy helped the expectant mother adapt to the enforced passivity of pregnancy.

Benedek (1970) saw fantasy during pregnancy as a normal expression of unconscious wishes stimulated by hormonal changes in the female estrogen cycle. For Benedek, fantasies during pregnancy influenced the mother-infant bond. The type of fantasy could predict positive or negative bonding.

Current thinking in obstetrical nursing parallels that of the psychoanalysts. According to Rubin (1972), fantasies during pregnancy enhance bonding between the mother and the future child. Rubin writes, "There is a richness in fantasy in the second and third trimesters of pregnancy. It is through fantasy that the pregnant woman binds in, not just physically, but psychologically to the idea of her child. The fantasies serve to orient her toward the child in the future: its sex, appearance, and personality and of how it will be to have such a child" (p. 106).

The psychoanalysts describe pregnancy as a time when unconscious fantasies surface, revealing unresolved conflicts around sexuality, gender identification, and narcissistic needs. According to these theorists, fantasies, while expressions of unconscious conflicts, need not lead to problems in maternal adaptation, but problems can occur if the fantasies are not repressed subsequent to delivery.

During pregnancy, the expectant mother must confront her identification with her own mother and father, and her previous experience of

being mothered. According to Deutsch, the unborn child, when fantasied as a boy, may symbolize the prospective mother's own masculine strivings and/or her masculine ideal unrealized in her father and/or husband. "However much she may be controlled by a sense of reality, every woman feels that she bears a future hero in her womb, and the content of her fantasy is the 'myth' of his birth. He not only represents her own masculinity--even when she is the most feminine of women--but he also represents all the overvaluation that once applied to her father and possesses all the virtues his own father lacks" (p. 150).

The fantasied girl represents the mother's own ego-ideal even more fully, with the girl symbolizing all of the mother's unrealized expectations for herself. For Deutsch, these perfect-baby fantasies, which express narcissistic needs, are even less likely to be verbalized by the mother than the more troublesome fearful fantasies of death or harm coming to the infant.

Both Deutsch (1945) and Pines (1972) allude to problems in maternal adaptation if the fantasies are not accepted as such, but continue to be acted out as though they were reality. For example, if the new mother transfers her fantasies of herself as the perfect mother of the perfect child onto the actual mother-child interaction, then problems may well surface in the mother-infant relationship.

Pines (1972) writes, "The task a woman has to accomplish in pregnancy and motherhood is to integrate reality with unconscious fantasy, hopes, and daydreams." She recounts six case histories where the necessary integration has not taken place and pathology

occurs: "...where the early mother-child relationship shows pathological features partly due to fantasies continuing to be acted out rather than being repressed, and to past conflicts being unresolved thus influencing the present" (p. 337).

Theorists also note the presence of both positive and negative fantasies during pregnancy. However, whether the valence of the imagery differentially affects maternal adaptation remains unclear.

Deutsch (1945) conceived of two types of fantasies: those representing the unconscious wishes and those representing the unconscious fears of pregnancy. Wish fantasies, as previously discussed, express the mother's narcissistic ego ideal. Included in this group are fantasies of perfect, beautiful babies who embody all the qualities the mother would like for herself. Fear fantasies, such as images of crippled, malformed infants, possibly symbolize the mother's guilt and/or masochism in Deutsch's theory.

Benedek (1970) theorized that fantasies of the fetus as the "loving and loved self" predicted positive adaptation to motherhood, while negative fantasies of the fetus as the "bad, aggressive, devouring self" boded less well for maternal adjustment. This theory has not been tested empirically.

Rubin (1972) also notes the presence of both positive and negative fantasies during pregnancy, but interprets them less psychodynamically. In her clinical observations, pleasant wish-fantasies occur earliest, but fear fantasies soon follow. "For every set of wishes, there is a concomitant set of fears. The more important the wish, the greater the fear that it will not materialize. Wish

strength and adapt better.

To determine whether the dreams of pregnant women differed from those of other women, he compared the pregnant group to a nonpregnant control group. Dreams differed markedly across groups, with pregnant women, not surprisingly, reporting more baby dreams (40%:1%). Greater than fifty percent of the pregnant women dreamt of harm or misfortune in the environment coming to either her infant or herself, while only ten percent of the nonpregnant group evidenced themes of harm or misfortune.

In an attempt to better understand the psychology of a first pregnancy, Colman (1969) conducted an ongoing therapy group for six healthy, primiparous women. He noted what appeared to be the normal occurrence of fears and anxieties expressed through dreams, particularly in the third trimester. He outlined two recurrent themes: in one, the woman, her husband, or their infant is harmed; in the other, the baby arrives through painless delivery where labor is bypassed. Colman hypothesized that "a close fit between a woman's ideal expectations and actual performance during labor and delivery is an important source of positive feminine self-esteem, probably crucial at the threshold of motherhood" (p. 795).

Both of these studies describe the normal course of pregnancy as entailing dreams of fearful content such as harm coming to the baby. Neither, however, systematically evaluated the relationship between fearful fantasies and maternal adaptation. However, Gillman (1968) did attempt to relate masochistic and hostile content to adaptation, but found no relationship.

Sherwin (1981) surveyed 50 third trimester primiparous women in an effort to better understand the fantasy state during pregnancy. She noted that all the women in her project share "a great need to discuss their dreams--both day and night--and fantasies, in an effort to reassure themselves that their thoughts were normal" (p. 398). Through the descriptive data that she gathered, she concluded that fantasies during pregnancy normally fell into two general categories, "those associated with either positive emotions such as pleasure, joy, and peace; or the negative states of fear, guilt, and panic" (p. 400). The fearful images most commonly involved themes of having an abnormal infant or fantasies about being attacked. While no attempt was made to examine the relationship between the presence of fantasies and the psychological well-being of the mother, Sherwin (1981) inferred that "fantasy during pregnancy, especially during the third trimester, can be highly negative and troublesome in nature" (p. 299). As a nurse, Sherwin emphasized the importance of maternity nursing staff reassuring pregnant women of the normalcy of their fantasies, even when the content is frightening.

Images which express fears and anxieties may enable the expectant mother to work through these troublesome areas before birth. After the birth, she will need all of her psychic and physical energy to care for her infant. The presence of frightening images before delivery may lead to better adaptation after delivery. Second, images which express wishes or expectations may allow the expectant mother to "try on" a new role and, through rehearsal, cope with the upcoming transition. Rubin (1972) calls fantasies during pregnancy "the preparatory essays

for future behavior in reality" (p. 105). She hypothesizes from her clinical experience: "acceptance of a new role and a new relationship depends on how the situation is viewed after the role has been tried out in fantasy or imagination...if there is fantasy, a trying-on of how this role would feel, there is consideration of the role" (1970, p. 506).

Shereshefsky and Yarrow (1973) validated this impression in their longitudinal study of 60 married primiparas. Through the use of projective tests and interviews administered both pre- and postnatally, they found positive correlates between several personality variables and adaptation to pregnancy. The ability to visualize oneself as a mother was one of the three scores most predictive of positive adaptation.

Clearly, the literature on fantasy during pregnancy leaves many questions unanswered. First, the descriptions of fantasies are largely drawn from the clinical observations of either psychoanalytically oriented therapists or nurses. The relationship between fantasy and adaptation to motherhood, while frequently inferred, has seldom been empirically tested. The one study which evaluated the relationship between fantasy and maternal adaptation used night dreams as opposed to day dreams and was based on psychoanalytic notions of feminine masochism (Gilman, 1968).

An additional problem involves the failure to differentiate between the fantasies of daydreams and those of night dreams, possibly due to the common element of symbolism in both. While the two types of fantasy may indeed be similar, it may not be appropriate to assume

identical properties.

While several authors attest to the normalcy of both positive and negative fantasies during pregnancy (Deutsch, 1945; Sherwin, 1981), it is not known whether the valence of imagery differentially affects a woman's psychological well-being. No one has evaluated that relationship systematically. Both types of images may play important, but different coping functions for pregnant women.

Cesarean versus Vaginal Deliveries

The purpose of the present study is to explore the relationship between imagery and maternal adaptation, with a special focus on cesarean versus vaginal delivery modes. The childbirth experience may differ greatly for women who deliver by cesarean, as opposed to those who deliver vaginally, with treatment differences in imagery.

Childbirth involves a complex interaction between psychological and physiological effects. In addition, childbirth in our society usually entails medical intervention, which varies widely from the prescription of analgesics to the use of major abdominal surgery, as in the case of cesarean delivery. Despite the significant level of surgical intervention in cesarean delivery, few studies have addressed the issue of what effect, if any, delivery mode has on a woman's psychological well-being.

The role of delivery mode in postpartum maternal adjustment seems especially relevant given that one woman in six in the United States today delivers by cesarean section (Affonso, 1981). According to the National Instititue of Health Census Development Task Force on

Cesarean Childbirth (U. S. Department of Health and Human Services, 1981), the rate of cesarean deliveries tripled in a recent ten-year period. The precipitous nature of the increase may partially explain why, until recently, so little research has been focused on this question.

Concomitant with the increase in cesareans has been a growing public concern about the possible emotional consequences for the mother (Cohen & Estner, 1983). The Task Force on Cesarean Childbirth (1981) labeled the rising cesarean birthrate "a matter of concern" and highlighted the need for further research on cesarean delivery. The panel, comprised primarily of physicians, noted that "there is little research concerning the psychological impact on parents following a cesarean birth. Nevertheless, surgery is clearly an increased psychological and physical burden when compared with normal vaginal delivery" (p. 1).

A number of anecdotal studies attest to the negative impact of cesarean delivery on mothers, but do not provide comparative data on women who deliver vaginally (Affonso & Stichler, 1980; Fawcett, 1981; Lipson & Tilden, 1980; Marut, 1978).

Studies which have compared the two groups systematically have generally focused more on the mother's satisfaction with the delivery than on measures of her psychological well-being, such as anxiety and depression (Cranley, Hedahl, & Pegg, 1983; Marut & Mercer, 1979). Cranley et al. (1983) compared three groups of women who delivered either vaginally, by planned cesarean, or by emergency cesarean. The women completed self-report questionnaires two to four days post-

partum. All three groups differed significantly in their perception of the delivery, with the emergency cesarean group expressing the least satisfaction and the vaginal group expressing the most. Factors which positively influenced cesarean mothers' perceptions included regional anesthesia (as opposed to general) and the presence of their husbands in the delivery room. The groups averaged forty subjects, a large enough sample to lend credence to the findings.

Marut and Mercer (1979) compared the perceptions of twenty primiparous women who delivered by emergency cesarean with those of thirty primiparous women who delivered vaginally. Subjects completed questionnaires and interviews within forty-eight hours postpartum. They hypothesized that women who delivered by emergency cesarean would have less positive perceptions of the delivery than women who delivered vaginally. Results supported this hypothesis. They also examined the effects of regional versus general anesthesia and found women who received regional anesthesia reported more satisfaction with the delivery than those who received general anesthesia.

In a study of 294 primiparous women, Mercer, Hackley, and Bostrom (1983) reported that the fifty-six women who delivered by cesarean perceived their childbirth experience less negatively than those who delivered vaginally, as measured by a questionnaire administered postnatally. However, in a stepwise multiple regression analysis, they found that delivery mode accounted for only one percent of the variance in satisfaction. Numerous other factors contributed more, such as the presence of a supportive significant other, early post-

partum mother-infant interaction, the psychological health of the mother, and the physical health of the baby.

One empirical study assessed satisfaction with the delivery as well as the psychological variables of the mother's anxiety, depression and attitude toward the baby (Bradley, Ross, & Warnyca, 1983). One hundred and twenty-five primiparous women were administered standardized psychological tests in pregnancy, while in the hospital, and one month postpartum. No differences were found on measures of psychological well-being (depression, anxiety, attitude toward the baby) between cesarean and vaginal mothers. However, women who delivered by cesarean reported less satisfaction with the delivery than mothers who delivered vaginally.

This study suggests that maternal psychological well-being may not differ on the basis of delivery mode, even though satisfaction may differ. This finding of less satisfaction is not surprising, as the cesarean group did not have the fathers present in the delivery room while the vaginal group did, and the cesarean group received general anesthesia. Both are factors which contribute to positive perceptions of the delivery.

Several factors have been found to influence a woman's satisfaction with a cesarean delivery and may mitigate against negative effects. More positive perceptions of the delivery are associated with regional or local as opposed to general anesthesia, the presence of the father in the delivery room (Cranley et al., 1983; Marut & Mercer, 1979), previous preparation for cesarean (Mercer et al., 1983), contact with the infant immediately postpartum (Mercer et al., 1983),

and health mothers and healthy babies (Mercer et al., 1983). Nevertheless, few studies have systematically controlled for these factors when evaluating group differences.

The present research was designed to address the following questions: In a study which took the above-mentioned variables into account, would differences still emerge on measures of maternal psychological well-being (depression, anxiety, and confidence in mothering), as well as satisfaction with the delivery? In the event of no differences, what factors, other than delivery mode, influence a mother's psychological well-being immediately following delivery?

Research Aims

The research presented here is part of a larger study on the psychological aspects of childbirth, with a focus on the differential effects of delivery mode. It was designed to evaluate the spontaneous use of imagery during pregnancy and childbirth, and the relationship of imagery to postpartum psychological well-being (as measured by anxiety, depression, and confidence in mothering) across delivery modes.

In the event of no differences between delivery groups on measures of psychological well-being and imagery, what factors, other than delivery mode, are associated with more positive postpartum functioning? Of most interest is the question of whether spontaneously-generated imagery correlates with maternal adaptation, as imagery is generally considered a coping mechanism. If the use of imagery is related to maternal adaptation, does valence of imagery

(positive, neutral, or negative) exert a differential effect?

This study is exploratory in nature; by examining the use of imagery and its relationship to maternal adaptation across delivery modes it will hopefully point the way for future research in this little-studied area of health psychology. Its focus is on health, not pathology, but the information gained may be useful to women who have difficulty coping spontaneously with one of life's most natural, but often stressful, events: childbirth.

C H A P T E R I I

METHOD

Subjects

Two groups of twenty-two women each were selected from the obstetrical ward of Wesson Women's Hospital of Baystate Medical Center in Springfield, Massachusetts. The groups differed on the basis of delivery mode; one group delivered vaginally and the other delivered by emergency cesarean section. The vaginal group received no general, spinal, or epidural anesthesia, while the cesarean group received either spinal or epidural, but no general anesthesia. Women in the cesarean group expected to deliver vaginally, but received emergency cesareans due primarily to dystocia (the failure to progress in labor.

All subjects were selected on the basis of the following inclusion criteria:

1. primiparous women, age 20-35;
2. married, with husband present throughout the delivery;
3. delivery occurred within the last 24-48 hours;
4. prior to delivery, the couple attended childbirth education classes;
5. healthy mother, determined by
   a. absence of intensive care;
   b. postpartum condition assessed by delivering obstetrician to be good or better; and,

6. healthy baby determined by
   a. absence of neonatal intensive care;
   b. postpartum condition assessed by delivering physician to be good or better;
   c. five minute infant Apgar score greater than 6.

Subject Recruitment Procedures

Prior to the selection of subjects, a research protocol was presented to the Baystate Medical Center Human Subjects Committee and the University of Massachusetts Psychology Department Human Subjects Committee. Upon approval of the research project, the obstetricians of all the study subjects were contacted for permission to include their patients.

The subjects were recruited from the obstetrical ward of Wesson Women's Hospital. Fifty-eight couples met the inclusion criteria and agreed to participate in the study. The final sample of forty-four was selected on the basis of completed information (i.e., both the husband and wife completed the questionnaire packet). In addition, the two groups were matched for date of delivery (within three weeks) to control for the potential effects of time and season.

Subjects signed informed consent forms which allowed the researchers to abstract relevant data from their hospital charts. Inclusion criteria were verified through the medical records (see Appendix A for medical record sheet) and nursing information.

Researchers

Two female advanced clinical psychology graduate students coordinated the study. Seven undergraduate research assistants were trained to participate in every aspect of the research. In preparation for the study, the two research coordinators attended the seven-week Prepared Childbirth Course offered by the Parent Education Department of Wesson Women's Hospital, in the role of participant-observers.

Instruments

Outcome Measures

Psychological well-being was assessed by the measurement of three psychological constructs: depression, anxiety, and confidence in mothering. State, rather than trait, measures of affect were used in the case of anxiety and depression, as we were more interested in the effect of delivery mode on postpartum mood than in general personality traits.

Depression. One outcome measure, depression, was measured by Lubin's (1965) 32-item self-report Depression Adjective Checklist (DACL), Form B (see Appendix B). The DACL was developed to provide brief, reliable, and valid measures of state depressive affect (Lubin, 1981).

Lubin (1981) provided the following evidence of reliability and validity and normative data. Group norms were established from a national probability sample (N = 1,450), with adult females scoring

a mean of 8.09 (SD = 4.78). Internal consistency was found to be high (.88 for adult females). As would be expected in a state measure, test-retest reliability was reportedly low (ranging from .19 to .22 for three forms).

Concurrent validity was established by correlating the DACL with self-ratings of depression (r = .95, p .01), another state measure of depression, the College Inventory of Depression (r = .68, $p < .01$), and several trait measures of depression, including the Beck Inventory of Depression (r = .50, $p < .01$), Zung Depression Scale (r = .32, $p < .05$), and the Global Rating of Depression (r = .35, $p < .05$). In addition to face validity, construct validity was determined through factor analyses, which revealed two internally consistent factors, variously termed, "depressed mood" and "elevated mood." Finally, good discriminant validity was established, with the DACL able to differentiate between female normals and female patients with 85.8% accuracy.

Anxiety. The second outcome measure, anxiety, was assessed using the state component of the State-Trait Anxiety Index, Form Y (Spielberger, Gorsuch, & Lushene, 1968). The state anxiety scale consists of twenty items which describe immediate feeling states, such as "I feel calm" (see Appendix B). The scale is designed to tap feelings of apprehension, tension, nervousness, and worry and has been widely used to evaluate level of anxiety in adults under stress.

In the 1983 manual, Spielberger provides extensive evidence of reliability and validity, as well as normative data. For working females, ages 19-39, the mean level of state-anxiety is 37.17

(SD = 10.96, N = 210). Form Y was developed and standardized on more than 5,000 subjects.

Reliability data indicate low test-retest consistency for adult females (r ranges from .16 to .31 over three time periods), which is appropriate for a state measure of anxiety.

Construct validity of the state component was evidenced by higher scores for neuropsychiatric groups than normals, and higher scores under stressful situations (i.e., examination conditions) than non-stressful conditions (regular classroom period). Support for the convergent and divergent validity of the state anxiety measure were also provided.

Confidence in mothering. The third outcome measure determined confidence in mothering by using a modified version of Shea and Tronick's (1982) Maternal Self-Report Inventory. Sixteen items were selected on the basis of face validity to evaluate feelings of confidence in mothering (see Appendix B). Internal reliability was established (Chronbach's alpha = .86, N = 58).

Dependent Variables

Pregnancy symptoms. Women were asked to report on thirty-one pregnancy symptoms (i.e., backache, insomnia, etc.) in the month prior to delivery and since delivery (see Appendix B), using the Pregnancy Symptoms Checklist (Erickson, 1967). No data were available regarding reliability and validity. The scale was chosen because of its face validity and to determine the possible relationship between pregnancy symptoms and psychological adjustment.

Vividness of imagery. The Betts QMI Vividness of Imagery Scale, short form (1969). Previous imagery research indicates that the ability to image vividly is associated with increased treatment effects (Gold et al., 1982; Richardson & Taylor, 1982). The scale was selected because it is the most widely used measure of ability to image, with adequate reliability and validity statistics. Subjects were asked to rate the vividness of their images in five sensory modalities, including visual, auditory, tactile, gustatory, and olfactory (see Appendix B). Sheehan (1967) determined that the shortened form measures a general ability to image, not a specific ability within sensory modalities.

Reliability for the Betts was assessed by means of test-retest and Chronbach's alpha for 81 females tested at 2 week intervals (Westcott & Rosenstock, 1976). First administration yielded an alpha coefficient of .92, while the second administration produced an alpha coefficient of .94, with test-retest reliability equal to .75. This indicates good internal consistency and test-retest reliability.

The validity of the scale "has repeatedly been demonstrated by high correlations obtained between scores on the test and the direct evocation of imagery in a wide variety of experimental settings" (Sheehan, 1967).

Fantasies during pregnancy questionnaire. This questionnaire was specifically designed for this study in order to evaluate the spontaneous use of self-generated imagery. Women were asked to record fantasies of either themselves or their infants before, during, and after delivery and to rate them as either positive, neutral, or nega-

tive (see Appendix B). Valence of imagery has been shown to differentially affect treatment, with positive images generally having a more beneficial effect than negative images (Remer, Watson, & Brinley, 1978). In addition, women were asked to rate whether their fantasies before delivery matched their actual experience.

Childbirth perceptions. This 58-item questionnaire was designed for this study to assess women's perceptions of the childbirth experience. Divided into three subscales, one subscale measures a woman's satisfaction with the childbirth experience and delivery mode. Internal reliability was demonstrated (Chronbach's alpha = .84).

Summary

The wife's questionnaire packet contained, in the following order, an informed consent form, a demographic information face sheet, Pregnancy Symptoms Questionnaire, the state component of the Spielberger State-Trait Anxiety Index, Fantasies During Pregnancy Questionnaire, Childbirth Perceptions Questionnaire, the Dyadic Adjustment Scale (not relevant to this study), the Depression Adjective Checklist, the Betts QMI Vividness of Imagery Questionnaire, and the Maternal Self-Report Inventory. Husbands also received a questionnaire packet which will not be discussed here, as the husbands' responses were not relevant to this project.

Procedure

During the first six months of 1984, the investigators visited the regular (non-intensive care) obstetrical ward of Wesson Women's

Hospital approximately five times weekly. The nursery station provided public information regarding recent deliveries (the type of delivery, birth order, marital status of the mother, and the need for neonatal intensive care). The minority of women who were married first-time mothers with healthy infants were contacted by the investigators in their hospital rooms. The investigators introduced themselves as students from the University of Massachusetts studying the transition to parenthood and asked whether the couple had attended childbirth preparation classes and the husband had attended the delivery. If so, the couple was given the option of participating in the study. Those who agreed to participate and signed informed consent forms were given questionnaire packets and instructions on how to fill them out. Husbands and wives were requested to complete their questionaire packets independently of one another. An investigator collected the questionnaires and was available to answer questions and address concerns.

With informed consent and permission to examine medical records, the investigators then further verified the inclusion criteria through hospital chart information. Medical records were checked for type of anesthesia, health of the mother and infant, reason for cesarean, etc. (see Appendix A), and marital status and parity were also verified. The vast majority of women who delivered during that time period were not married primiparas, but other reasons for exclusion included general anesthesia, early discharge, lack of interest on the part of either the husband or wife, and health complications for the mother or infant. Fifty-eight couples met the criteria and agreed to participate.

CHAPTER III

RESULTS

Introduction

This chapter contains four sections. The first describes the sample in terms of demographic and major outcome variables. The second summarizes the overall use of fantasy and provides a qualitative content analysis. The third section outlines the statistical comparisons of cesarean versus vaginal group differences, and the fourth details the statistical analyses used to evaluate the relationship between major outcome variables and other variables, such as fantasies, on combined groups. In addition, a brief summary of the results will be presented.

Sample Characteristics

Demographic

Due to the inclusion criteria, all women in the study were married, between ages twenty and thirty-five, and delivering their first child. To determine whether the groups were analogous on other demographic characteristics, *t*-tests were performed on parametric data and chi-square analyses were performed on nonparametric data. Comparisons of mean age and years of post-secondary education revealed no group differences. Similarly, chi-square analyses of discrete data evidenced no significant differences between groups on ethnicity, work history or plans, graduation from high school, or family income.

As a whole, the group of women studied was primarily Caucasian

(36 of 37 who responded to question on ethnicity), with one black respondent. The mean age was 26.18 years. The level of education appeared relatively high, with all of the women having completed high school and the majority (71.4%) continuing on for further education. The years of post-secondary education ranged from 0-6, with a mean of 2.63 (see Table 1).

In terms of work, most women were both working during the pregnancy (81.8%) and planning to return to work (62.8%). One woman did not answer the return to work question and two were uncertain of their plans.

The annual family income question indicated that seventy-nine percent of the forty-three who responded earned more than $20,000 (see Table 1).

Labor and delivery. Women who delivered by cesarean did not differ significantly from those who delivered vaginally, in hours of labor, the use of analgesics, infant Apgar score, the sex of the newborn, infant birthweight, or the type of feeding chosen (breast or bottle). In terms of anesthesia, the cesarean group received either spinal (91.9%) or epidural (9.1%). Neither group was administered general anesthesia. The reason for cesarean was primarily the failure to progress in labor (18 or 22, or 81.8%). Fetal distress prompted the cesarean in three cases (13.6%). Breech presentation was the reason for cesarean for only one mother.

As a combined group, the hours of labor ranged from 4.5 to 24, with a mean of 12.364 (see Table 1). Cesarean deliveries occurred after an average of 13.75 hours of labor, while vaginal deliveries

TABLE 1

Demographic Characteristics of Subjects

(N = 44)

	$\bar{X}$	SD
Age--Wife	26.18	3.38
Years of Postsecondary Education--Wife	2.63	1.87
Months Married	44.61	32.48
Hours of Labor	12.36	5.60
Infant's Weight in Ounces	123.50	14.44

Family Income	Absolute Frequency	Relative Frequency (Percent)
$0 - $10,000	2	4.5
$10,000 - $20,000	7	15.9
$20,000 - $30,000	17	38.6
Over $30,000	17	38.6
No Answer	1	2.3
TOTAL	44	100.0%

occurred after 10.98 hours.

The newborns all received high five-minute infant Apgar scores, with ninety-three percent obtaining the highest score of nine and the rest receiving a score of 8. Twenty-two boys and twenty-two girls were born, evenly distributed within groups. On the average, the infants weighed 123.5 ounces (see Table 1). Most (36, or 81.8%) of the new mothers opted to breast feed their infants, while the rest chose to bottle feed.

Normative Data

Major Outcome and Imagery Variables

In this study, the total sample's scores on anxiety and depression fell within established norms, indicating that anxiety and depression levels did not approach clinical significance. While no normative data is available, the women studied here evidenced high confidence in mothering and ability to image. Table 2 illustrates the means and standard deviations for the combined group.

Depression. The sample (N = 44) averaged 5.41 (SD = 3.43) on the Depression Adjective Checklist (Lubin, 1978). These scores closely parallel those of a non-clinically depressed population studied by Christenfeld, Lubin, and Satin (1978). Over three hundred staff members of a psychiatric institution were administered the DACL and rated for depression by psychiatrists. Those receiving the lowest depression rating averaged 5.32 (SD = 3.06) on the DACL. In a nationwide depression survey (n = 1,450), adult women averaged 8.09 (SD = 4.78) on the DACL (Levitt & Lubin, 1975). Higher scores on the

TABLE 2

Means and Standard Deviations of Scores on Major Outcome Variables

(N = 44)

	$\bar{X}$	SD
Depression	5.41	3.43
Anxiety	32.41	9.90
Confidence in Mothering	62.20	8.00

DACL are associated with more depression.

Anxiety. The sample studied averaged 32.41 (SD = 9.89) on the state component of the State-Trait Anxiety Index (Spielberger, Gorsuch, & Lushene, 1968). In a normative study by Spielberger (1983), working adult females aged nineteen to thirty-nine averaged 36.17 (SD = 10.96) on the state component. Women aged nineteen to thirty-nine who scored 32 on state anxiety would fall in the forty-fourth percentile, according to Spielberger (1983). Higher scores indicate higher anxiety.

Confidence in mothering. No established normative data are available, but women in this study averaged a score of 62.21 (SD = 8.00) on a scale with a theoretical range in scores from sixteen to eighty. The higher the score, the more confidence in mothering was expressed. In general, this sample scored on the high end of confidence in mothering.

Betts

The QMI Vividness of Imagery Scale used has a theoretical range from thirty to one hundred and eighty, with lower scores indicating more vividness, a measure of overall ability to image. The group averaged scores of 73.93 (SD = 23.89), well below the midpoint of 105, indicating good ability to image.

Fantasies

Frequency

Women were asked to describe fantasies of themselves or their babies before, during, and after labor and to categorize them as positive, neutral, or negative. Table 3 details the frequency of fantasies in each category.

Forty-one of the forty-four women studied (93.2%) reported spontaneous fantasies in at least one category. Positive fantasies occurred most often: all of the women who fantasized described at least one positive fantasy, while ten of those listed positive fantasies exclusively. In general, however, women who fantasized tended to experience both positive and negative fantasies (71.0%). Neutral fantasies appeared less frequently, in approximately one-third (36.4%) of the women studied.

Overall, the women averaged between six and seven fantasies ($\bar{X}$ = 6.59, SD = 3.65), three or four of which were positive ($\bar{X}$ = 3.66, SD = 1.77), two negative ($\bar{X}$ = 1.98, SD = 1.79), and one neutral ($\bar{X}$ = 0.96, SD = 1.56).

Descriptions of Fantasies

As this was an exploratory study of spontaneously generated imagery, a qualitative summary of the types of imagery women reported in each category will be presented, with illustrative examples of major content areas. Within each category (i.e., before labor positive fantasies), women were asked to describe images of themselves and/or their babies. Many women, however, included their infants

TABLE 3

Relative Frequencies (%) of Women Expressing Fantasies

(N = 44)

Type of Fantasy	No Fantasies	Fantasies
Before Labor		
Positive Self	27.3	73.7
Positive Baby	15.9	84.1
Neutral Self	72.7	27.3
Neutral Baby	75.0	25.0
Negative Self	47.7	52.3
Negative Baby	54.5	45.5
During Labor		
Positive Self	63.6	36.4
Positive Baby	63.6	36.4
Neutral Self	93.2	6.8
Neutral Baby	93.2	6.8
Negative Self	59.1	40.9
Negative Baby	77.3	22.7
After Labor		
Positive Self	36.4	63.6
Positive Baby	27.3	72.7
Neutral Self	84.1	15.9
Neutral Baby	86.4	13.6
Negative Self	79.5	20.4
Negative Baby	84.1	15.9

in fantasies of themselves and vice versa. Therefore, throughout this section, self and baby subcategories are combined within the larger categories.

Before labor positive fantasies. More women (88.6%) experienced fantasies of themselves and/or their babies in this category than any other. An examination of the content of the images revealed four general themes. Before labor, women tended to picture themselves 1) experiencing an easy labor and delivery; 2) being thin and attractive again; 3) being competent, proud mothers; and/or 4) delivering beautiful, healthy babies. The content areas were not discrete, as many fantasies contained two or more of the general themes.

One woman's response illustrates two general themes: "I had positive fantasy images of all natural childbirth and my baby being beautiful and smiling." Several other women pictured easy, quick, or painless deliveries with themselves remaining in control during delivery.

Fantasies of being thin or attractive were typified by the following: "I pictured myself to be a gorgeous mother--losing all my weight in two weeks." Images of competent, proud mothering included idyllic fantasies of mother-child interactions. For example, one woman shared the image of herself as "the perfect mother--smiling, happy, proudly displaying the perfect baby." Another daydreamed of "a beautiful baby nursing at my breast."

Positive fantasies of the baby before delivery were similarly idyllic. One woman described "images of taking a healthy, blond, smiling baby on activities with us, walks in a snugli, to the beach

as a happy family." Interestingly, most pictured a baby of indeterminate sex, although a few experienced fantasies specific to one sex. For example, one woman imagined "having my baby girl's ears pierced and buying her little diamond earrings to wear, she would look like a little princess in my mind's eye."

Before labor neutral fantasies. Less than one third (29.5%) recalled neutral fantasies of themselves or their babies before labor. The following illustrates a response in this category: "thought of size and mental picture of baby with no determined sex."

Before labor negative fantasies. A majority of women (61.4%) expressed negative fantasies before labor. Again, four general content areas emerged. In order of frequency of occurrence, the negative fantasies entailed themes of: 1) unhealthy, malformed babies; 2) painful, difficult deliveries; 3) unpleasant or bad mothering experiences; and/or 4) being fat and unattractive forever.

In the first content area, the women described vivid fantasies of unhealthy or malformed babies. Although difficult to quantify due to the overlap among content areas, it was evident that most of the women who experienced negative images had at least one such fantasy of this nature. Typical of this group, one woman imagined an "unhealthy, possibly deformed baby being delivered." Less typical, but illustrative, two women mentioned death fantasies; one fantasized that the baby would be "retarded, dead, ugly" while the other pictured a baby who was "handicapped, sick, stillbirth."

The group of women who fantasized about the pain of delivery saw themselves as losing control or not coping well. For example, one

woman wrote, "I pictured myself having a long and painful delivery. I also pictured myself not handling the pain well. I pictured what I would do if my labor started and I was with people. I would be embarrassed about my emotions."

The negative images of bad mothering experiences are exemplified by this woman's description: "[I will] always be fat--will lose husband because of the baby--baby will not like me--will not be able to take care of the baby." Another mother mentioned, "seeing myself as a bad mother--not being able to handle it."

Expressing the theme of unattractiveness, one woman colorfully stated, "I would sometimes see myself with a fat behind and fat gooter cheeks--very unattractive to men."

During labor positive fantasies. A little less than half (47.7%) of the women studied recalled positive fantasies of either themselves or their babies during labor. Within this category, women tended to have images of handling labor well, delivering healthy babies, and relaxation fantasies. One woman held an image of herself as "Super Mom" during labor, while another "pictured [herself] handling labor well and having a normal vaginal delivery" despite the fact that she delivered by cesarean. Images of babies were typified by the following fantasy: "full, healthy baby emerging through the birth canal."

Four women used relaxation images during labor and delivery. As one woman experienced it: "Two very vivid fantasy images I had during labor and delivery--one with me and my husband in a sailboat in the middle of a quiet lake--another with me and my husband sitting by a brook watching the autumn leaves falling on a warm day. Both helped

ease my pain."

During labor neutral fantasies. Only three women described fantasies during this period.

During labor negative fantasies. A little less than half (45.5%) of the women reported negative fantasies during labor of themselves and/or their infants. Most prevalent in this category were images of failure during labor and/or harm coming to themselves or their babies. One woman pictured herself as "a big baby" during labor, while another "pictured [herself] not being able to make it through labor and delivery and they would put [her] under anesthesia and deliver the baby with forceps." The most negative images entailed fears of harm or death, such as a woman's fantasy that she "would not live through labor" or another's fear of the baby "not making it through the delivery, her heart stopped."

After labor positive fantasies. After labor, seventy-three percent of the women studied described positive fantasy images of themselves and/or their babies. Almost all of these experienced idyllic images of good mothering and/or happy, healthy babies. For example, one woman said, "I pictured my baby and me at home, quiet, getting to know each other and love each other with my husband by my side." Typical of the baby images, a woman described her fantasy: "I imagine the baby in her room with all its decorations and the baby looks so happy and peaceful."

After labor neutral fantasies. Neutral images were uncommon, with sixteen percent recording images of either themselves or their babies. According to one woman, "I've had images of the responsibili-

ties I now have to face in the upbringing of my child."

After labor negative fantasies. Four women (22.7%) acknowledged negative fantasies of themselves or their babies after labor. Those that did tended to picture themselves as incompetent mothers or the babies as difficult. For example, one woman imagined "that after I leave here, I won't know how to take care of the baby properly," while another reported "I imagine that once I get home the baby will become cranky for me and no longer be content and sleepy."

Differences Between Groups

Major Outcome Variables

Depression. Using *t*-test comparisons of differences in mean scores on depression, no significant differences emerged between women who delivered vaginally and those who delivered by cesarean section ($t(42) = 1.06$, $p = .296$). Although not significant, group means indicated that the cesarean group reported somewhat more depression than the vaginal group (cesarean $\bar{X} = 5.96$, vaginal $\bar{X} = 4.86$).

Anxiety. No significant differences were revealed between groups on anxiety using *t*-tests ($t(42) = 1.26$, $p = .215$). Again, the cesarean group reported more anxiety, although not more than could have occurred by chance (cesarean $\bar{X} = 34.27$, vaginal $\bar{X} = 30.56$).

Confidence in mothering. In a *t*-test comparison, no significant differences were demonstrated between groups on confidence in mothering ($t(42) = -.09$, $p = .93$). Mean scores were virtually identical for the two groups, with the cesarean group reporting only slightly less confidence in mothering (cesarean $\bar{X} = 62.09$, vaginal $\bar{X} = 62.32$).

Fantasy Variables

Total fantasies. In a t-test comparison of group means on total number of fantasies, no significant differences emerged between groups ($t(42) = -.49$, $p = .626$). In general, the cesarean group evidenced slightly fewer fantasies than the vaginal group (cesarean $\bar{X} = 6.32$, vaginal $\bar{X} = 6.86$).

Positive, neutral, and negative fantasies. In separate t-tests comparing average numbers of positive, neutral, and negative fantasies across groups, no significant differences were evident (positive $t(42) = -1.29$, $p = .20$; neutral $t(42) = .77$, $p = .44$; negative $t(42) = -.42$, $p = .49$).

Individual fantasy items. Chi-square analyses of individual fantasy items across groups indicated no significant differences, whether two categories (presence or absence of fantasies) or three (no fantasies, fantasies once or twice, or fantasies several times) were used. For example, the two groups did not differ in presence or absence of before labor positive fantasies of their babies.

Individual fantasy items collapsing over self and baby. Chi-square analyses of individual fantasy items collapsing over self and baby revealed no significant group differences, regardless of whether two or three categories were analyzed. For example, both groups were comparable in the frequency of before labor positive fantasies, combining self and baby fantasies.

Presence or absence of fantasies. Chi-square analysis revealed no significant differences between the two groups. Twenty-one of the twenty-two women who delivered vaginally experienced at least one

fantasy, whereas twenty of the twenty-two women who delivered by cesarean fantasized.

Other Variables

Physical symptoms before delivery. During the postpartum testing, women were asked to check which of a number of pregnancy physical symptoms they had experienced before delivery. Group comparisons using t-tests indicated that the difference in the average number of physical symptoms was nonsignificant ($t(42) = -.10$, $p = .92$; cesarean $\bar{X} = 17.95$, vaginal $\bar{X} = 18.09$).

Physical symptoms after delivery. Women were also asked to indicate the physical symptoms they had experienced since delivery. While the mean number of physical symptoms was higher in the cesarean group ($\bar{X} = 14.23$) than in the vaginal group ($\bar{X} = 11.5$), the difference approached, but did not reach, significance ($t(42) = 1.86$, $p = .07$).

Physical symptoms individual items. Chi-square analyses of group differences on presence or absence of individual symptoms indicated only one significant difference. Twenty-one of the twenty-two cesarean women reported abdominal or vaginal pain after delivery, which only fifteen of the twenty-two vaginal women reported ($\chi^{2\ 2} = 3.89$, $p < .05$).

Satisfaction with delivery. Using t-tests, the two groups reported statistically significant differences in satisfaction, with the cesarean group evidencing less satisfaction than the vaginal group ($t(40) = 2.4$, $p < .02$). This was one subscale of the Spouse Perceptions Scale. Other subscales did not differ significantly.

In summary, women who delivered by emergency cesarean did not differ significantly from women who delivered vaginally on demographic characteristics; the major outcomes variables of anxiety, depression, and confidence in mothering; the number of physical symptoms; or the use of fantasy. The two groups could be differentiated only on the basis of satisfaction with the delivery.

Pearson Correlations

Given the finding of no differences between groups, the second question was raised as to what factors, if any, influence a woman's psychological well being in the immediate postpartum period. To determine whether the groups could be considered homogenous and combined into one group, a series of analyses were performed. First, Pearson correlations between major outcome variables and other variables were performed within cesarean and vaginal groups separately. In numerous cases, the correlations differed across groups (i.e., a significant correlation was found between depression and physical symptoms in one group but not the other). To determine whether the influences were significant, the Pearson correlation coefficients were transformed to z-scores and checked against Fischer's r to z table. In nineteen of the twenty-one analyses, no significant influence emerged. Therefore, it was determined that the two groups could be considered homogenous and combined. The following sections detail the results of Pearson correlations using the combined group (N = 44).

Major Outcome Variables

Significant intercorrelations were observed between major outcome variables, particularly anxiety and depression ($r(43) = .60$, $p < .001$). Anxiety also correlated (negatively) with confidence in mothering ($r(43) = .34$, $p < .01$), indicating that as anxiety increased, depression increased, but confidence in mothering decreased. The weakest association appeared to be between depression and confidence in mothering ($r(43) = -.20$, $p < .09$; see Table 4).

Fantasy Variables

Intercorrelations. Table 5 illustrates the intercorrelations among fantasy variables (positive, neutral, and negative). Negative and positive fantasies were strongly related to one another in a positive direction ($r(43) = .51$, p .001). Women who fantasized tended to have both positive and negative fantasies and as positive fantasies increased, so did negative fantasies. Neutral fantasies were unrelated to negative or positive fantasies.

Fantasies and major outcome variables. Table 6 summarizes the the Pearson correlations between fantasy variables and anxiety, depression, and confidence in mothering. Total number of fantasies correlated significantly in a positive direction with anxiety ($r(43) = .30$, $p < .025$), indicating that as anxiety increased, so did fantasies (and vice versa). A negative relationship emerged between fantasies and confidence in mothering ($r(43) = -.36$, $p < .01$), such that as fantasies went up, confidence in mothering went down. No significant relationship became evident between depression and

TABLE 4

Pearson Correlations Between Outcome Variables

(N = 44)

	Depression	Anxiety	Confidence in Mothering
Depression	--		
Anxiety	.60***	--	
Confidence in Mothering	-.2025	-.34**	--

*p < .05
**p < .01
***p < .001

TABLE 5

Pearson Correlations Between Fantasy Variables

(N = 44)

	Total	Positive	Neutral	Negative
Total Fantasies	--			
Positive Fantasies	.78***	--		
Neutral Fantasies	.55***	.10	--	
Negative Fantasies	.80***	.51***	.15	--

*p < .05
**p < .01
***p < .001

TABLE 6

Pearson Correlations Between Fantasy and Major Outcome Variables

(N = 44)

	Depression	Anxiety	Confidence in Mothering
Total Fantasies	-.03	.30*	-.36**
Positive Fantasies	-.14	.28*	-.34**
Neutral Fantasies	.11	.08	-.10*
Negative Fantasies	-.04	.27*	-.31*

*p < .05
**p < .01

fantasies. Neutral fantasies failed to relate significantly with any major outcome variables. However, negative fantasies followed the same pattern as total fantasies. Negative fantasies were associated with anxiety ($r(43) = .28$, $p < .03$), increasing as anxiety increased and decreasing as anxiety decreased. They were also related to confidence in mothering in a negative direction ($r(43) = -.34$, $p < .01$). The correlation between negative fantasies and depression was not significant.

Perhaps of most interest, positive fantasies conformed to the same pattern as negative and total fantasies. As positive fantasies increased, so did anxiety, while confidence in mothering went down. As with negative fantasies, no significance was found in the relationship between positive fantasies and depression (see Table 6).

Fantasies and physical symptoms. Table 7 demonstrates the relationship between fantasy variables and physical symptoms. Fantasies correlated positively with physical symptoms before delivery ($r(43) = .26$, $p < .05$), indicating that increases in number of fantasies are accompanied by increases in the number of physical symptoms (or vice versa). The relationship between fantasies and physical symptoms after delivery approached, but did not reach, significance (see Table 7).

Neither positive nor neutral fantasies correlated in a meaningful way with physical symptoms, although positive fantasies approached significance in relationship to physical symptoms before delivery. However, negative fantasies related to physical symptoms before and after delivery (see Table 7), demonstrating that changes in physical

TABLE 7

Pearson Correlations Between Fantasy Variables and Pregnancy Physical Symptoms

(N = 44)

	Symptoms Before Delivery	Symptoms After Delivery
Total Fantasies	.26*	.23
Positive Fantasies	.22	.10
Neutral Fantasies	.02	.13
Negative Fantasies	.30*	.25*

*$p < .05$

symptoms (i.e., increase in number of physical symptoms) were associated with changes in the same direction of negative fantasies (i.e., increase in number of negative fantasies).

Major Outcome Variables and Physical Symptoms

Physical symptoms before and after delivery correlated positively with both depression and anxiety (see Table 8). The relationship between physical symptoms before delivery and confidence in mothering did not demonstrate significance, whereas the relationship between physical symptoms after delivery and confidence in mothering did correlate significantly in a negative direction (see Table 8).

Not surprisingly, physical symptoms before delivery were strongly related to physical symptoms after delivery ($r(43) = .59$, $p < .001$).

Relationship Between Individual Fantasies and Other Variables

To evaluate whether women who fantasized in individual categories differed in a meaningful way from those who did not, a series of one-way analyses of variance were performed. These analyses attempted to answer questions such as the following: Do women who have negative fantasies of themselves during labor differ on level of anxiety from women who do not have negative fantasies of themselves during labor.

The individual categories were evaluated only if they were not skewed heavily in one direction (i.e., no neutral categories were examined, as most women did not experience neutral fantasies). Women who fantasized in individual categories were compared to women who did not fantasize; the variables evaluated were depression, anxiety, confidence in mothering, physical symptoms, and satisfaction with the

TABLE 8

Pearson Correlations Between Physical Symptoms and Major Outcome Variables

(N = 44)

	Depression	Anxiety	Confidence in Mothering
Physical Symptoms Before Delivery	.26*	.26*	-.14
Physical Symptoms After Delivery	.26*	.44***	-.28*

*p < .05
**p < .01
***p < .001

delivery. The following section outlines the statistically significant findings for each category.

Before labor positive self fantasies. Women who experienced positive fantasies of themselves before labor reported lower confidence in mothering than women who did not experience fantasies of this type ($F(43) = 6.19$, $p < .025$).

During labor negative self fantasies. Women who reported negative fantasies of themselves during labor (such as fear of losing control or failing to deliver a healthy baby) acknowledged more physical symptoms both before and after delivery than women who did not experience fantasies of this type. (Before: $F(43)$ 12.09, $p = .001$; After: $F(43) = 6.19$, $p < .025$). Fantasizers in this group also reported less confidence in mothering ($F(43) = 6.27$, $p < .025$).

During labor negative baby fantasies. Again, confidence in mothering was lower in the group who experienced negative baby fantasies during labor than in the group who did not ($F(43) = 7.58$, $p < .01$).

During labor positive fantasies. Interestingly, positive baby fantasies during labor occurred in women who indicated greater numbers of physical symptoms (Before: $F(43) = 4.06$, $p < .05$).

After labor positive baby fantasies. After labor, women who described positive baby fantasies scored lower on confidence in mothering than women who did not ($F(43) = 5.69$, $p < .025$). Fantasizers in this category also indicated more anxiety than non-fantasizers ($F(43) = 5.07$, $p < .05$).

Individual fantasies summary. In general, it appears that regardless of the valence of imagery, fantasies in specific individual categories can discriminate women on physical symptoms, confidence in mothering, and anxiety. These results are in keeping with the correlation analyses which found both positive and negative fantasies related to anxiety and confidence in mothering, and negative fantasies related to physical symptoms.

Relationship Between Valence of Imagery and Variables of Interest

The finding that positive as well as negative fantasies were positively correlated with anxiety and negatively associated with confidence in mothering was surprising, as positive fantasies are generally considered a coping mechanism. Given that women who image positively also tend to image negatively, the question was raised as to whether the negative images might in effect carry more weight (i.e., bear more of a relationship to anxiety and confidence in mothering than positive images). To determine this, the women who fantasized (N = 41) were divided into three groups: those who experienced only positive images (n = 10), those who experienced more positive than negative images (n = 22) and those who experienced negative images in equal or greater frequency than positive images (n = 9). Two one-way analyses of variance were performed across the three groups on anxiety and confidence in mothering. The results indicated no significant differences among groups on anxiety ($F(2, 38) = .575$, $p = .57$) or confidence in mothering ($F(2, 38) = .74$,

p = .48). The means for the three groups are presented graphically in Figure 1. Apart from nonsignificance, no trend was observed. It appears that women who have only positive fantasies do not differ significantly from women who have both positive and negative fantasies.

In the case of physical symptoms, negative but not positive, fantasies correlated with before and after physical symptoms. Two one-way analyses of variance were performed across the same three groups. Again, no significant differences emerged on physical symptoms before delivery ($F(2, 38) = 2.27$, $p = .12$), or after delivery ($F(2, 38) = 1.14$, $p = .33$). Mean scores for both analyses are represented graphically in Figure 2.

The graph indicates a strong trend for women who indicate more negative fantasies than positive fantasies to report more physical symptoms than women who experience more positive than negative or only positive fantasies.

Summary of Results

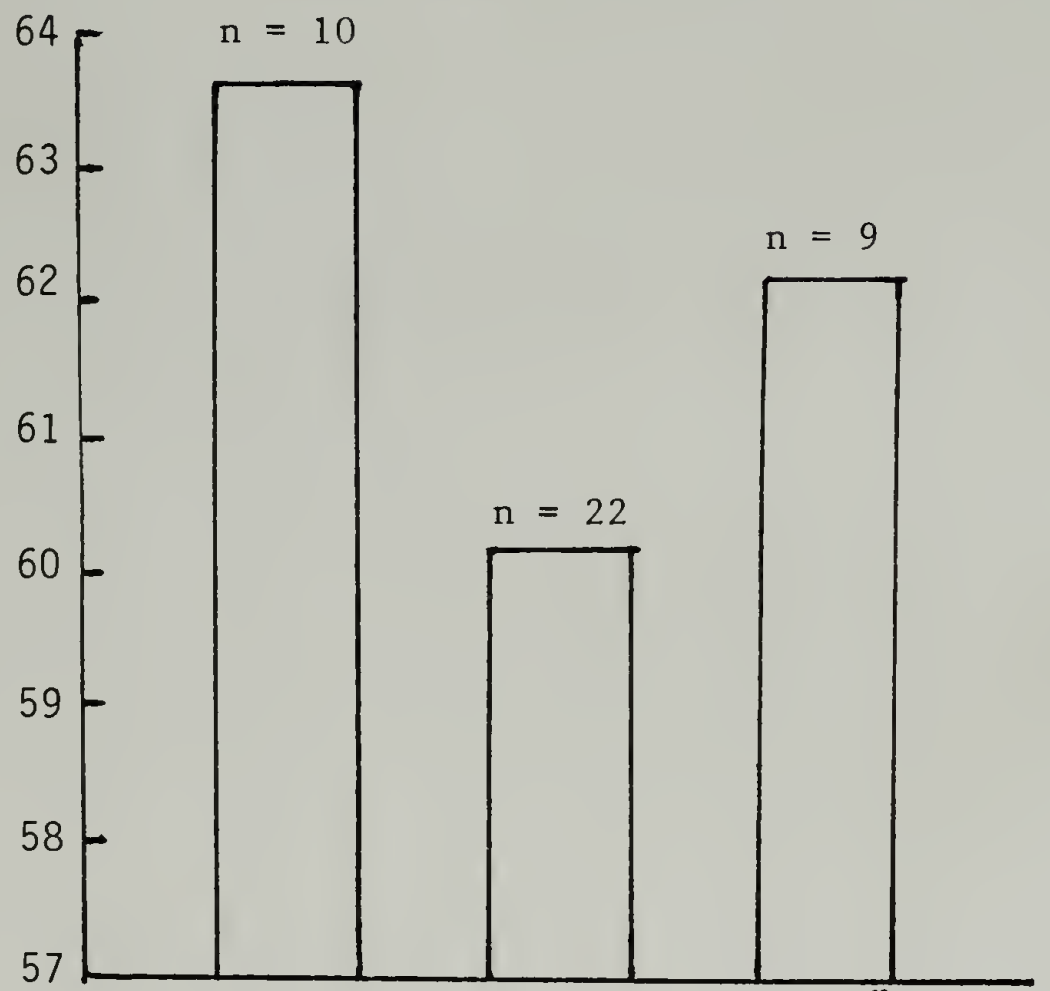
In summary, women who delivery by emergency cesarean did not differ significantly from women who delivered vaginally on three measures of psychological well-being: depression, anxiety, and confidence in mothering. The two groups also exhibited no differences on number of physical symptoms reported, or the use of fantasy. However, one significant difference occurred on a measure of satisfaction with the delivery, with women who delivered by cesarean reporting less satisfaction than those who delivered vaginally.

Determining that the two groups were homogenous and combining

FIGURE 1

Mean Scores on Outcome Measures:
A Comparison Over Valence of Imagery

Confidence in Mothering



Anxiety

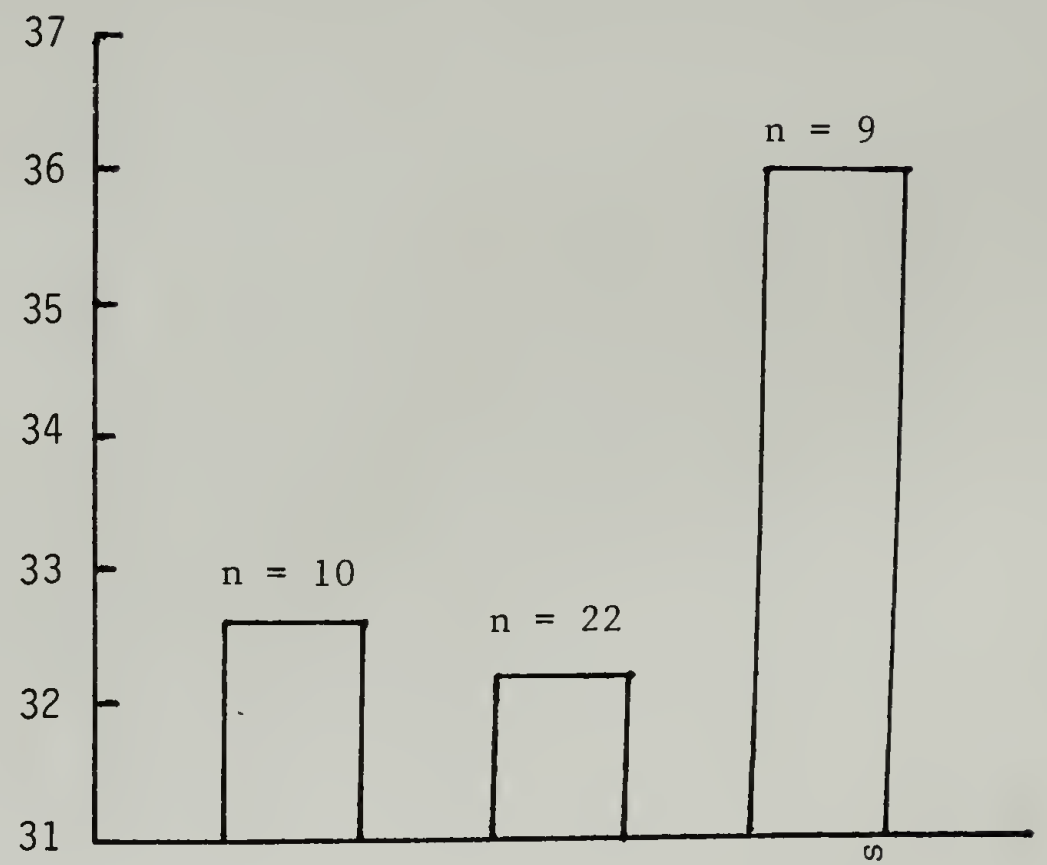
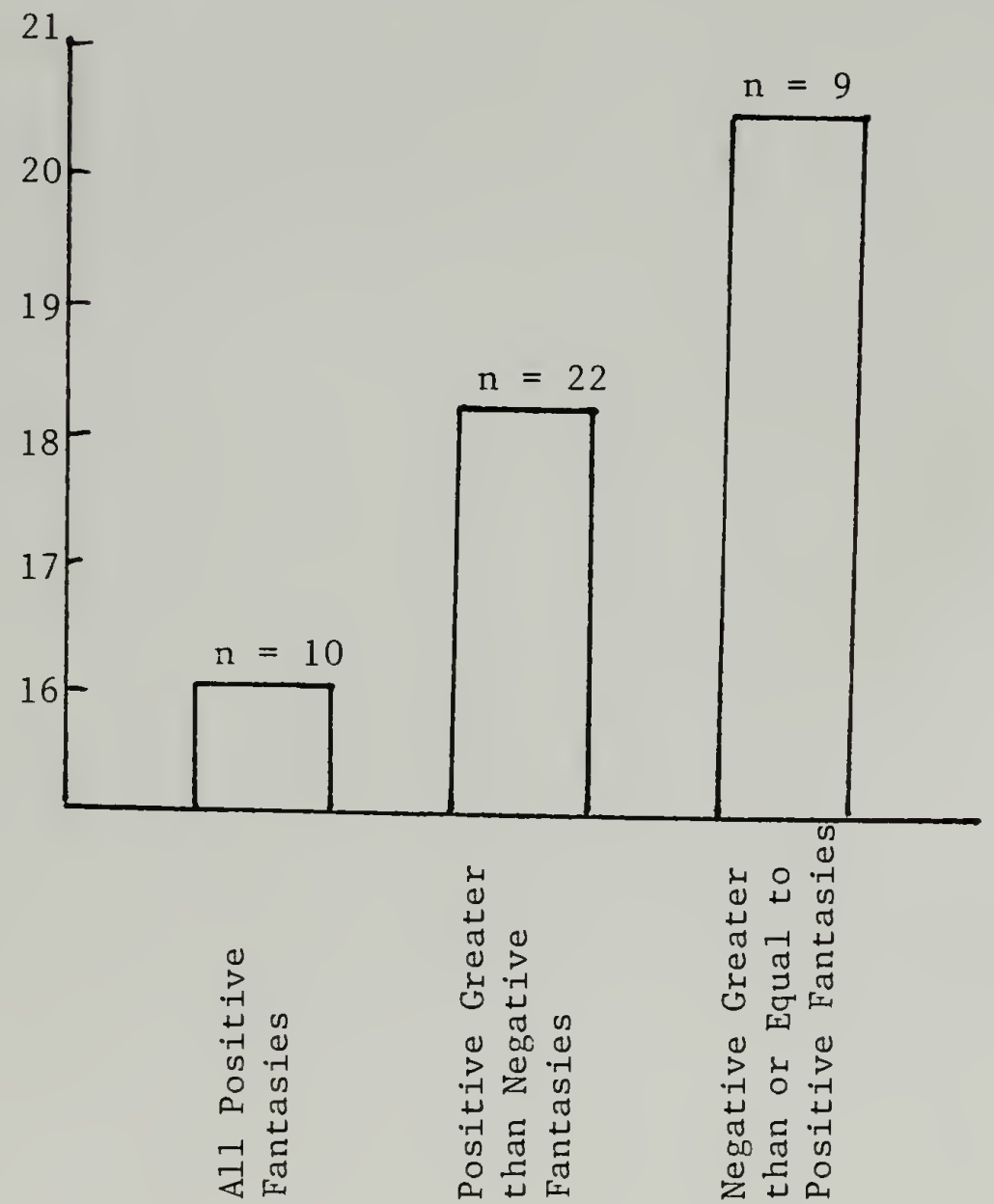


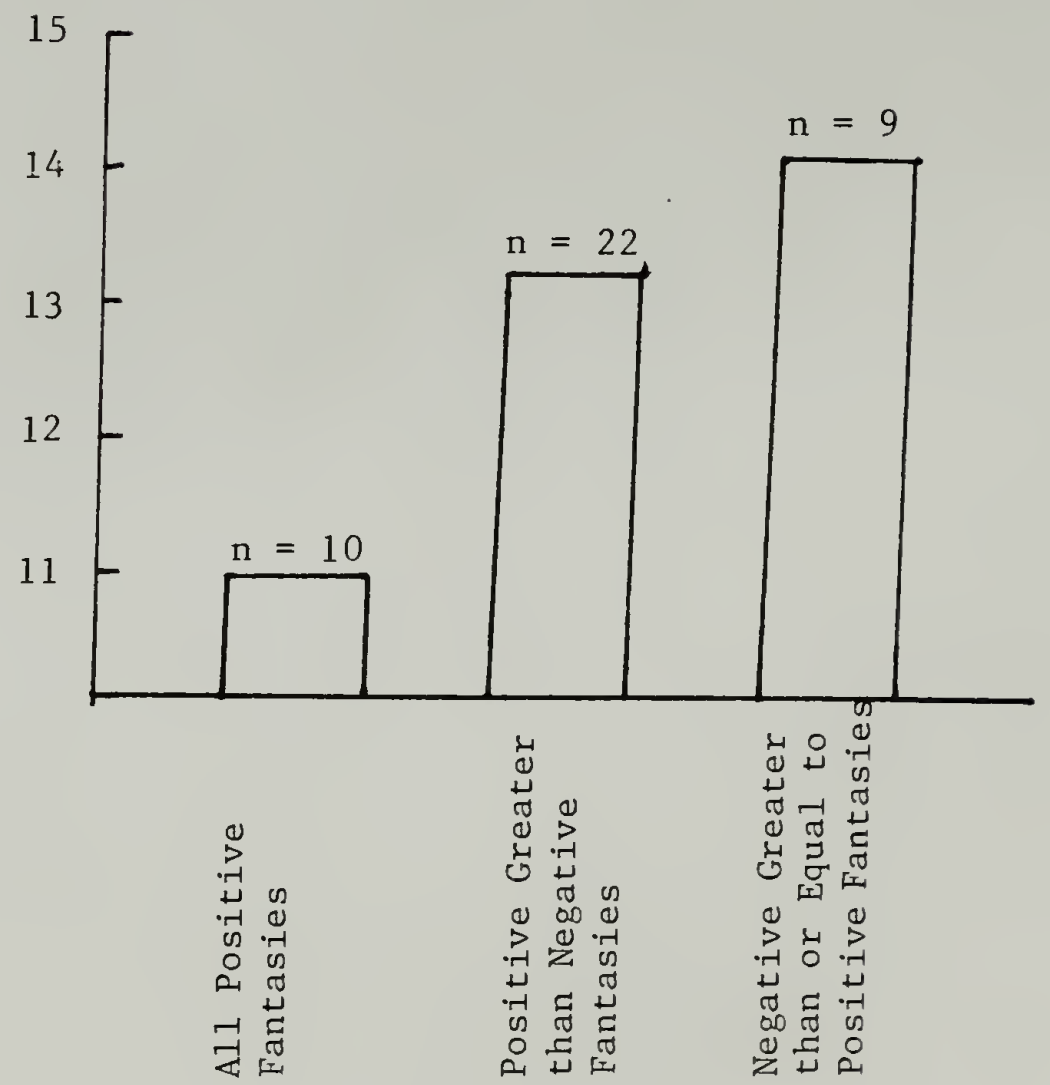
FIGURE 2

Mean Scores on Pregnancy Physical Symptoms:
A Comparison Over Valence of Imagery

Before Delivery Pregnancy
Physical Symptoms



After Delivery Pregnancy
Physical Symptoms



them allowed a series of Pearson correlations to be performed on a larger group (N = 44). The correlations attempted to determine what factors (particularly fantasies) were associated with a woman's psychological well-being in the immediate postpartum period.

In general, fantasies related to anxiety in a positive direction and confidence in mothering in a negative direction, but bore no relationship to depression. Counterintuitively, an increase in both positive and negative fantasies was associated with increased anxiety and decreased confidence in mothering. The analysis of individual categories of fantasy supported the correlational results. Fantasies and physical symptoms were also related in a positive direction.

CHAPTER IV

DISCUSSION

The findings of this study will be discussed in two sections. The first will address the effect of delivery mode on measures of psychological and physical well-being and imagery variables. The second will focus on the spontaneous use of imagery and its relationship to maternal adaptation.

Delivery Mode and Maternal Adaptation

The results of this study confirm those of earlier studies which report women who deliver by cesarean to be less satisfied with the delivery than women who deliver vaginally (Cranley et al., 1983; Marut & Mercer, 1979; Mercer et al., 1983). Despite the difference in level of satisfaction, there were no differences beteen the two groups on anxiety, depression, and confidence in mothering; three measures of the mother's psychological well-being.

Given the public concern over the increasing use of cesarean section as a viable delivery mode, the finding of no difference between delivery group on measures of psychological well-being seems both reassuring and timely. It seems relevant that the results of this study replicate those of a recent well-designed and well-executed study which also assessed both satisfaction with the delivery and psychological well-being (Bradley et al., 1983). Nevertheless, these findings need to be interpreted with caution for several reasons.

First, the number of subjects in each group (n = 22) was

relatively small. While the differences between groups on psychological variables were nonsignificant, an analysis of mean scores indicated a trend for women in the cesarean group to report more anxiety, more depression, and less confidence in mothering than the vaginal group. A replication study with a substantially larger sample size might reveal significant differences between groups.

Despite the trend toward better maternal adaptation in the vaginal group, both groups scored well within the normal range on anxiety and depression, the two measures with available normative data. This finding may be understood in terms of the timing of the study. All women received questionnaires in the immediate postpartum period, during their hospital stay. At that point, women may well be experiencing euphoria (albeit temporary) at the successful delivery of a healthy baby. The health of the baby and the mother, two factors carefully controlled for in this study, should not be underestimated. Previous research has demonstrated that the health of the baby and mother account for much more of the variance in postpartum satisfaction than delivery mode (Mercer et al., 1983). Future research in this area should include follow-up data, collected at two or more data points, to assess whether the lack of anxiety and depression is confined to the immediate postpartum period.

In addition to controlling for healthy mothers and infants, this study carefully matched groups on other variables known to positively influence a woman's experience of delivery. The women studied delivered at a hospital with policy progressive enough to allow fathers in the delivery room regardless of level of surgical inter-

vention. The presence of mate support during delivery has been found to positively influence a woman's satisfaction (Cranley et al., 1983; Marut & Mercer, 1979). Only married women whose husbands attended the delivery were selected for study. The effects of delivery mode may be more salient for women who do not have a significant person available for emotional support during delivery.

This sample was drawn from the population of couples who attended childbirth preparation classes and, therefore, is selectively biased. The group who attends prenatal classes at this medical center is primarily white, relatively well-educated and predominantly middle-class. No inferences could be drawn from this study and generalized to a population which did not fit this description. Future research on delivery mode might systematically compare women who have had the opportunity to prepare prenatally for childbirth and delivery (including the possibility of a cesarean) and women who have not.

Two other factors known to mitigate against the potentially negative effects of delivery were accounted for in this study. First, hospital policy at Baystate Medical Center allowed mothers immediate postpartum contact with their newborns, regardless of delivery mode. Second, the use of general anesthesia for either delivery mode is discouraged in this hospital. Most women who use anesthesia receive regional, spinal, epidural, or local anesthesia. Women in the cesarean group were selected partially on the basis of regional, as opposed to general, anesthesia. Previous research supports the importance of regional or local anesthesia over general anesthesia in a woman's positive experience of the delivery (Cranley et al.,

1983; Marut & Mercer, 1979).

Taking the above variables into account, in groups of women selected for the presence of husbands during the delivery, prenatal attendance at childbirth preparation courses, regional as opposed to general anesthesia, immediate contact with infants postpartum, and perhaps most importantly, healthy mothers and healthy newborns, the effect of delivery mode on psychological well-being appears negligible. Women who deliver by cesarean are not as satisfied with the delivery as women who deliver vaginally, but the delivery mode does not appear to impact negatively on maternal adaptation.

The implications seem clear for progressive hospital policy, which routinely incorporates as many of the above variables into obstetrical care as feasible. Nevertheless, further research using larger samples and including follow-up data would add strength to these findings.

Physical Symptoms and Imagery Variables

Apart from measures of psychological well-being, the two groups did not differ on other variables of interest: the reported number of physical symptoms before and after delivery and the use of imagery. Both physical symptoms and fantasy during pregnancy and delivery were assessed retrospectively and the lack of difference between groups on these variables may in part be accounted for by the "halo effect" of having just delivered a healthy baby. Future research in this area should assess the presence of both physical symptoms and fantasy before as well as after delivery.

Fantasy During Pregnancy and Childbirth

The Spontaneous Use of Fantasy

The findings of this study confirmed that the majority of women did use fantasy spontaneously during pregnancy and childbirth. In keeping with the clinical observations of previous theorists (Deutsch, 1945; Sherwin, 1981), the pregnant women studied tended to experience both positive and negative fantasies. While most of the primiparas reported both types of fantasy, approximately one-quarter of the women who fantasized expressed only positive fantasies.

The qualitative content analysis revealed several recurrent themes to the fantasies. Positive fantasies most often involved idealistic images of the mother (thin, beautiful, competent), the baby (perfect, beautiful, healthy), the mother-infant interaction (the perfect mother displaying the perfect baby), or an easy, painless labor and delivery.

Negative fantasies involved frightening images of harm coming to the mother or baby. Women who fantasized negatively tended to picture crippled, deformed, or stillborn babies and/or themselves losing control or, in two cases, dying during labor. These findings are in keeping with previous studies on the presence and nature of pregnancy fantasies (Deutsch, 1945; Rubin, 1972; Sherwin, 1981).

Relationship Between Fantasy and Maternal Adaptation

This study differed from previous research in that it attempted to empirically test the relationship between the spontaneous use of fantasy during pregnancy and childbirth and maternal adaptation. The

significance of that relationship was systematically evaluated using Pearson correlation statistics. Results indicated a significant association between the use of fantasy and two out of three measures of postpartum psychological functioning. Women who reported more fantasies experienced more anxiety and less confidence in mothering than women who reported fewer fantasies. In other words, a significant positive relationship emerged between fantasies and anxiety, a significant negative relationship existed between fantasies and confidence in mothering, and no significant relationship was demonstrated between fantasies and depression.

The finding that the spontaneous use of pregnancy fantasies is associated with decreased psychological functioning is of interest, as imagery has generally been used to enhance psychological well-being. Experimenter- or clinician-induced imagery has been shown to decrease anxiety and depression (Driscoll, 1976; Jarvinen & Gold, 1981). The results of this study raise the question of whether induced imagery and spontaneous imagery can be considered analogous. In settings where the clinician/investigator induces imagery, demand characteristics and placebo effects may be contributing to the efficacy of imagery in positively altering mood states. Careful research designed to tease out the influences of experimenter demands and placebo effects is needed to address this question more fully.

Aside from the above-mentioned problems, the question remains whether the very fact of being asked to fantasize doesn't irrevocably alter the experience, such that spontaneously generated imagery and imagery produced on demand are actually not comparable experiences.

Conceivably, a study could be designed which would compare the two types of imagery in a controlled way. For example, a group of women could receive imagery training in preparation for labor and later be compared to a group of untrained women on their use of imagery. The use of both types of imagery could be evaluated in relationship to maternal adaptation.

In this study, the use of a questionnaire which asked women for retrospective recall of fantasies confounds the comparison of these results with those of other studies. Most imagery research has evaluated the psychophysiological effects of imagery immediately after or simultaneously with induction. The confound of time could be addressed in a study, such as the one described earlier, in which at least two groups of women are asked to recall their fantasies during labor, one which was previously instructed to image and one which was not. In addition, women could be asked to record their fantasies daily during pregnancy.

Another issue which confuses the understanding of the spontaneously-generated imagery described here concerns the simultaneous production of both positive and negative fantasies. Previous research has demonstrated that valence of imagery differentially affects physiological response (Schwartz et al., 1976). Women in this study reported both positive and negative fantasies, two types of imagery which may vary in their psychophysiological effects.

To determine whether the two types of imagery were differentially related to maternal adaptation, separate correlational analyses were performed for positive and negative fantasies. Surprisingly, both

negative and positive fantasies followed a similar pattern in relationship to anxiety and confidence in mothering, increasing as anxiety increased, and increasing as confidence decreased. Intuitively, it seems plausible that recollection of negative fantasies might be associated with more anxiety and less confidence. While causation cannot be inferred, it could be hypothesized that the content of the negative fantasies was disturbing enough to be anxiety-provoking. Alternatively, anxious women who are not confident about their mothering may have been more likely than other women to fantasize negative possibilities.

The relationship between positive fantasies and decreased psychological functioning is more difficult to understand. The positive fantasies appeared to be extremely pleasant, often idyllic. It is important to note that positive and negative fantasies were strongly correlated with one another: women who fantasized tended to experience both positive and negative images. The question arises as to whether it is the nature of imagery itself, and not the valence per se, which adversely affects maternal adaptation. Or alternatively, whether the two types of imagery are interrelated in such a way as to be inseparable in their effect. It could be hypothesized that anxious women not only imagine highly negative outcomes, but highly positive images as well, perhaps in an attempt to compensate for the frighteningly negative fantasies. Certainly, the positive fantasies were as idyllic as the negative fantasies were horrific.

Through fantasy, these women may be expressing both their worst possible fears and their impossible dream of perfection. An evalua-

tion of the manifest content of the fantasies supports the notion that the images represent two polar extremes. While the term "realistic fantasy" may seem oxymoronic, it may aptly describe what is missing from these fantasies. The unrealistic element of the pregnancy fantasies may be adversely affecting postpartum psychological well-being. Breen (1975) demonstrated a relationship between images of perfect mothering and poor adaptation to motherhood. She advocated realism in their visions of motherhood, rather than unrealistically high expectations. It could be hypothesized that unrealistically low expectations could similarly impact on maternal adaptation. In sum, anxious women who are not confident about their mothering may fantasize the two extremes of perfection and disaster, when what is needed is an image of motherhood at least somewhat tempered by reality.

Alternatively, negative images may exert more of an influence on psychological functioning than positive fantasies, essentially overriding the potentially beneficial effects of positive images alone. To test this hypothesis, one-way analyses of variance were performed, separating the women who experienced only positive images from those who experienced more positive than negative images and those who expressed as many or more negative images as positive ones. The results indicated that the three groups did not differ significantly in their level of anxiety or confidence in mothering. While this finding indicates the implausibility of that hypothesis, the small number of women in two of the three groups may have influenced the findings of nonsignificance. A replication study with a substantially larger sample size would answer this question more definitely,

particularly if there was an additional group who expressed only negative fantasies.

Lastly, in terms of psychological well-being, it is worth noting that the use of fantasy was related to anxiety and confidence in mothering but was not systematically related to depression. It may be that anxiety and depression, while related, tap less similar constructs than anxiety and confidence in mothering. Fantasies relate therefore to the more anxious, less confident construct, but not to the depressive construct.

Relationship Between Fantasy and Physical Symptoms

Pearson correlation statistics indicated a systematic relationship between the overall use of fantasy and the reported number of physical symptoms before and after delivery. Negative fantasies followed the same pattern, while positive fantasies did not correlate significantly. Again, these findings are of interest, as traditionally imagery has been used to improve physical functioning.

Several problems emerge in attempts to understand these results. As previously mentioned, both questionnaires were administered post-partally. Retrospective recall may have been influenced by the recent delivery of a healthy baby. In addition, the physical symptoms questionnaire assessed only number, and not intensity, of physical symptoms. Much of the work on the beneficial physical effects of imagery assesses pain or healing, two areas which this questionnaire did not tap. Future research should include a measure of pain to determine whether imagery exerts a beneficial (or detrimental) effect.

Conclusion

In conclusion, it appears that the use of fantasy is related to psychophysiological measures of maternal adjustment. Imagery, of both a positive and negative nature, is associated with more postpartum distress. The direction of this relationship is surprising, given the clinical and experimental evidence of imagery as a coping mechanism which enhances psychophysiological functioning. Given this finding, can we conclude that imagery fails as a coping mechanism in the stressful, naturalistic setting of childbirth? The answer may be a qualified "no," as it is possible that anxious women, who are not confident about their mothering need to use more fantasy than others in order to bolster their confidence and reduce anxiety. Without the use of fantasy, the sample of women could have been even more anxious and less confident. It is important to remember that the sample studied demonstrated levels of anxiety and confidence well within the normal range. Perhaps the absence of fantasy would have been correlated with higher levels of anxiety and lower levels of confidence. In order to determine this, future research should include both pre- and post-delivery measures of anxiety and confidence in mothering. It would be interesting to assess state as well as trait anxiety to determine if the state-anxious women use fantasy more than others. The best design would include a large enough sample that a subset of women who do not use fantasy could be compared to those who do. In this study, only three women did not report fantasies, making systematic analysis impossible.

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APPENDICES

APPENDIX A

Medical Record Form

MEDICAL CHART SHEET

1. Prepared childbirth classes _____
2. Labor medications _____
3. Labor complications _____
4. Delivery medications _____
5. Delivery complications _____
6. APGAR _____
7. Fetal Distress: YES ___ NO ___
8. Condition of mother after delivery _____
9. Condition of infant _____
10. Baby received by (nursery) _____
11. Cesarean or Vaginal? _____
    if Cesarean, reason _____
    if Cesarean, planned or unplanned? _____
12. Hours of Labor _____
13. Address: _____
14. Phone: _____
15. Other:

OBSTETRICIAN: permission has been obtained from the following:

___ Baez
___ Barton & Hill (B & H)
___ Brownstein
___ Burke
___ Cahill
___ Carpenter
___ Clark (of VOGA)
___ Charles
___ FOE (Egan, Fitzpatrick, Oneill)
___ Doney
___ HCGO
___ Hollander
___
___

___ Kenler
___ Giraud
___ MED WEST
___ Olney
___ Shifrin
___ Sorrentino
___ Zadvorny
___ Van Oeyen
___ Epstein
___ Haddad
___
___
___
___

A P P E N D I X B

Questionnaire Packet

Consent Form

The purpose of this research project is to better understand the childbirth experience and the transition to parenthood. Approximately 90 couples will be studied.

Participation in the study is entirely voluntary. If you agree to participate, you will be asked to fill out a questionnaire packet given to you by doctoral students in clinical psychology. The cooperation of your spouse will also be requested. No risks or problems are anticipated in conducting this research. However, we recognize that childbirth and the transition to parenthood represent very emotional experiences. If you agree to participate, you should feel free to terminate your participation at any time, for any reason. The refusal to participate of either the mother or father will not in any way affect the medical care the new mother or infant receives.

Permission is also requested to view the mother/infant hospital record. All information obtained in this study will remain completely confidential; your responses and your medical information will not be available to any individual involved in your care, although we suggest that you mention your participation to your obstetrician. In addition, your responses will not be shared with your spouse, or with anyone other than the project researchers. No name or other identifying information will be used in presenting or discussing the data at any time.

The principal investigators (see below) can be contacted to provide answers to any questions you may have about the research, or to provide referrals should you wish to further discuss any issues concerning your experience.

Participant Statement

I have read the above statement. I consent to participate in the project and for mother/infant hospital records to be reviewed. I understand that participation in this study is voluntary and that I may withdraw from the study at any time.

_____ Date

_____ Participant Signature

Dr. Ronnie Janoff-Bulman Dr. Bonnie Strickland
Department of Psychology
University of Massachusetts
Amherst, MA 01003
545-0662

Or Contact

Max Chorowski, M.D.
Dept. of OB/GYN
Baystate Medical Center
787-5595

CONGRATULATIONS ON YOUR NEW BABY!

We are interested in your experience as new parents. This packet contains questionnaires about your thoughts and feelings during pregnancy, labor (if you went through labor) and delivery, and after delivery. Please complete the questionnaire within the next 24 hours. A researcher will be by to pick up the completed packet and to see if you have any questions.

TODAY'S DATE _____
DELIVERY DATE _____

INFORMATION ABOUT YOU:
AGE ____
ETHNIC BACKGROUND _____
EMPLOYMENT _____
DO YOU PLAN TO RETURN TO WORK? ___ IF YES, WHEN? _____
HIGH SCHOOL GRADUATE? _____
YEARS OF EDUCATION SINCE HIGH SCHOOL ____

INFORMATION ABOUT YOUR HUSBAND:
AGE ____
ETHNIC BACKGROUND _____
EMPLOYMENT _____
HIGH SCHOOL GRADUATE? _____
YEARS OF EDUCATION SINCE HIGH SCHOOL ____

OTHER INFORMATION:
NUMBER OF YEARS MARRIED _____
ANNUAL FAMILY INCOME: ___ $0 - $10,000
___ $10,000 - $20,000
___ $20,000 - $30,000
___ above $30,000

NUMBER OF PREVIOUS MARRIAGES: WIFE ____ HUSBAND ____
NUMBER OF PREVIOUS CHILDREN: WIFE ____ HUSBAND ____

PREGNANCY & DELIVERY HISTORY:
NUMBER OF PREVIOUS PREGNANCIES: ____
DID YOU ATTEND PREPARED CHILDBIRTH CLASSES? YES ___
NO ___
IF YES, WHERE? _____
NAME OF OBSTETRICIAN _____
DID YOU EXPERIENCE LABOR? YES ___ NO ___
IF YES, FOR HOW LONG? _____
TYPE OF DELIVERY: VAGINAL ____ CESAREAN ____
WHO ATTENDED THE DELIVERY? _____
DID YOU PLAN TO USE THE BIRTHING ROOM? _____
IF YES, DID YOU USE IT? _____
DID YOU HAVE A: BOY _____ GIRL _____
HOW MUCH DID (S)HE WEIGH? _____
TYPE OF FEEDING: BREAST _____ BOTTLE ____

HOW CLOSE WAS YOUR DELIVERY TO YOUR DUE DATE? (Please indicate if the delivery was earlier, later, or right on the due date)

_____

PHYSICAL SYMPTOMS QUESTIONNAIRE

Please report how often you have had the following symptoms or feelings:
(A) In the Month Prior to Delivery and (B) Since Delivery.

	(A) IN THE MONTH PRIOR TO DELIVERY			(B) SINCE DELIVERY		
	NEVER	SOMETIMES	OFTEN	NEVER	SOMETIMES	OFTEN
1. HEADACHE	—	—	—	—	—	—
2. FATIGUE	—	—	—	—	—	—
3. NAUSEA	—	—	—	—	—	—
4. VOMITING	—	—	—	—	—	—
5. DEPRESSION	—	—	—	—	—	—
6. BACKACHE	—	—	—	—	—	—
7. IRRITABILITY	—	—	—	—	—	—
8. SPOTTING OR BLEEDING	—	—	—	—	—	—
9. CONSTIPATION	—	—	—	—	—	—
10. DIARRHEA	—	—	—	—	—	—
11. ANXIETY	—	—	—	—	—	—
12. LOSS OF SOCIAL INTEREST	—	—	—	—	—	—
13. INCREASED APPETITE	—	—	—	—	—	—
14. LOSS OF APPETITE	—	—	—	—	—	—
15. DIZZY SPELLS	—	—	—	—	—	—
16. NERVOUSNESS	—	—	—	—	—	—
17. INSOMNIA	—	—	—	—	—	—
18. SWOLLEN LIMBS	—	—	—	—	—	—
19. SHORTNESS OF BREATH	—	—	—	—	—	—
20. ABDOMINAL OR VAGINAL PAIN	—	—	—	—	—	—
21. COLD HANDS OR FEET	—	—	—	—	—	—
22. INCREASED SEXUAL DESIRE	—	—	—	—	—	—
23. DECREASED SEXUAL DESIRE	—	—	—	—	—	—
24. TENSION	—	—	—	—	—	—
25. EUPHORIA	—	—	—	—	—	—
26. FREQUENT URINATION	—	—	—	—	—	—
27. CHILLS	—	—	—	—	—	—
28. VAGINAL ITCHING OR IRRITATION	—	—	—	—	—	—
29. HEARTBURN	—	—	—	—	—	—
30. FLUSHED FEELING	—	—	—	—	—	—
31. HEARTPOUNDING	—	—	—	—	—	—

SELF-EVALUATION QUESTIONNAIRE

Developed by Charles D. Spielberger
in collaboration with
R. L. Gorsuch, R. Lushene, P. R. Vagg, and G. A. Jacobs

STAI Form Y-1

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then blacken in the appropriate circle to the right of the statement to indicate how you feel *right* now, that is, *at this moment*. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

	NOT AT ALL	SOMEWHAT	MODERATELY SO	VERY MUCH SO
1. I feel calm	①	②	③	④
2. I feel secure	①	②	③	④
3. I am tense	①	②	③	④
4. I feel strained	①	②	③	④
5. I feel at ease	①	②	③	④
6. I feel upset	①	②	③	④
7. I am presently worrying over possible misfortunes	①	②	③	④
8. I feel satisfied	①	②	③	④
9. I feel frightened	①	②	③	④
10. I feel comfortable	①	②	③	④
11. I feel self-confident	①	②	③	④
12. I feel nervous	①	②	③	④
13. I am jittery	①	②	③	④
14. I feel indecisive	①	②	③	④
15. I am relaxed	①	②	③	④
16. I feel content	①	②	③	④
17. I am worried	①	②	③	④
18. I feel confused	①	②	③	④
19. I feel steady	①	②	③	④
20. I feel pleasant	①	②	③	④

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Fantasies During Pregnancy

During pregnancy many women, but not all, fantasize about their future child and themselves as new mothers. Women who do fantasize often have some pleasant fantasies and some unpleasant ones. In this questionnaire, you will be asked whether (and how often) you experienced positive, neutral, and negative fantasies of yourself and your baby. For the purposes of this study, positive fantasy-images are those that you experienced as pleasant (such as the image of a healthy, smiling infant, or images that helped you relax or reduce pain). Negative fantasy-images are those that you experienced as unpleasant (such as an image of an unhealthy infant, or a painful delivery). Neutral images are those that you experienced as neither pleasant nor unpleasant.

It is important to remember your fantasy images (which involve sensations like seeing, hearing, or feeling), not your thoughts. For example, you may have thought, "I'd like to have a girl." What we are interested in whether you fantasized (pictured or felt yourself) having a baby girl. Another example of a thought would be, "I didn't want to have a Cesarean." A fantasy-image would be, "I had a picture of myself as a real Earth Mother, I could only imagine a vaginal delivery."

I. In the month prior to delivery, did you experience any

A. positive fantasy-images
   1. of yourself? never ___ once or twice ___ several times ___
   2. of your baby? never ___ once or twice ___ several times ___

If you experienced one or more positive images, please describe them below:

B. neutral fantasy-images
   1. of yourself? never ___ once or twice ___ several times ___
   2. of your baby? never ___ once or twice ___ several times ___

If you experienced one or more neutral images, please describe them below:

C. negative fantasy-images
   1. of yourself? never ___ once or twice ___ several times ___
   2. of your baby? never ___ once or twice ___ several times ___

If you experienced one or more negative images, please describe them below:

II. <u>During labor and/or delivery</u>, did you experience any

A. <u>positive</u> fantasy-images

1. of yourself? never ___ once or twice ___ several times ___

2. of your baby? never ___ once or twice ___ several times ___

If you experienced one or more positive images, please describe them below:

B. <u>neutral</u> fantasy-images

1. of yourself? never ___ once or twice ___ several times ___

2. of your baby? never ___ once or twice ___ several times ___

If you experienced one or more neutral images, please describe them below:

C. <u>negative</u> fantasy-images

1. of yourself? never ___ once or twice ___ several times ___

2. of your baby? never ___ once or twice ___ several times ___

If you experienced one or more negative images, please describe them below:

III. <u>Since delivery</u>, have you experienced any

A. <u>positive</u> fantasy-images

1. of yourself? never ___ once or twice ___ several times ___

2. of your baby? never ___ once or twice ___ several times ___

If you experienced one or more positive images, please describe them below:

B. <u>neutral</u> fantasy-images

1. of yourself? never ___ once or twice ___ several times ___

2. of your baby? never ___ once or twice ___ several times ___

If you experienced one or more neutral images, please describe them below:

C. negative fantasy-images

1. of yourself? never ___ once or twice ___ several times ___

2. of your baby? never ___ once or twice ___ several times ___

If you experienced one or more negative images, please describe them below:

IV. Did your fantasies before labor and/or delivery match your actual experience? (For example, if you imagined a baby girl, did you have a girl? Or, if you imagined yourself having a Cesarean, did you? etc.)

A. Please describe the fantasies that matched the actual experience

1. of yourself:

2. of your baby:

B. Please describe the fantasies that did not match the actual experience

1. of yourself:

2. of your baby:

V. Please feel free to add any comments that you think would be of interest:

____A

CHILDBIRTH PERCEPTIONS QUESTIONNAIRE

The following questions ask you about your own feelings and about how you think your husband feels. It is important that you base your answers on your own opinions, without asking your husband about his perceptions.

Use the scale which follows in responding to the questions below. For each statement below, choose the answer which best describes how you feel. Place the number you choose in the space preceding each statement. Please be sure to answer every question.

1 = agree completely

2 = agree on the whole

3 = agree slightly

4 = disagree slightly

5 = disagree on the whole

6 = disagree completely

____ 1. I feel satisfied about my conduct during labor and delivery.

____ 2. I lost control of myself emotionally during labor.

____ 3. I feel that I did not deal with the physical pain during labor as well as other women do.

____ 4. I think my husband feels satisfied about my conduct during labor and delivery.

____ 5. I felt embarrassed about my physical appearance during pregnancy.

____ 6. I am satisfied with the way I delivered (vaginal or cesarean).

____ 7. I am concerned that I will not be as physically attractive as I was before I had a baby.

____ 8. As a result of my childbirth experience, my self-respect has gone up.

____ 9. Sexual activity or desire frequently decreases for the first 6-8 weeks after delivery. I worry about how this will affect the next few months.

____ 10. I think my husband felt emotionally close to me during labor.

____ 11. I think my husband is satisfied with the amount of drugs/medication I used during labor and delivery.

____ 12. I think my husband feels the experience of pregnancy has strengthened our relationship.

1 = agree completely
2 = agree on the whole
3 = agree slightly
4 = disagree slightly
5 = disagree on the whole
6 = disagree completely

_____ 13. I felt my husband was aware of my needs during the childbirth experience.

_____ 14. I feel disappointed about my conduct during labor and delivery.

_____ 15. I felt emotionally close to my husband during labor.

_____ 16. I think the experience of pregnancy has strengthened my relationship with my husband.

_____ 17. I think my husband is worried that the baby will in some ways have a bad effect on our relationship.

_____ 18. I think my husband has less confidence in me, as a result of our childbirth experience.

_____ 19. I think my husband is concerned that I will not be as physically attractive as I was before I had a baby.

_____ 20. I was satisfied with how much control I had over decisions made during my childbirth.

_____ 21. I think my husband thought that the labor and delivery would be easier for me than they were.

_____ 22. I think my husband felt he was aware of my needs during the childbirth experience.

_____ 23. I think my husband is satisfied with how we communicated during labor.

_____ 24. I think my husband was satisfied with the relationship he had with my doctor during the childbirth experience.

_____ 25. I could not have done as well during the childbirth without my husband's assistance.

_____ 26. Sexual activity or desire frequently decreases for the first 6-8 weeks after delivery. I think my husband worries about how this will affect the next few months.

_____ 27. I am satisfied with the amount of drugs/medication I used during labor and delivery.

_____ 28. I am worried that the baby will in some ways have a bad effect on my relationship with my husband.

_____ 29. I think that, as a result of our childbirth experience, my husband's respect for me has gone up.

_____ 30. I did things during labor and delivery that I think my husband is now embarrassed by.

1 = agree completely
2 = agree on the whole
3 = agree slightly
4 = disagree slightly
5 = disagree on the whole
6 = disagree completely

____ 31. I am disappointed by my childbirth experience.

____ 32. I think my husband feels he is spending as much time as he possibly can visiting me in the hospital.

____ 33. As a result of the labor and delivery experience, I feel I do not cope very well with pain.

____ 34. I think my husband is satisfied with the way I delivered (vaginal or cesarean).

____ 35. I think the experience of pregnancy has hurt my relationship with my husband.

____ 36. I feel that my husband was as helpful as he could have been during the childbirth experience.

____ 37. I think my husband felt embarrassed about my physical appearance during pregnancy.

____ 38. I think my husband is disappointed by my childbirth experience.

____ 39. I am satisfied with how my husband and I communicated during labor.

____ 40. I felt embarrassed about my physical appearance during labor and delivery.

____ 41. I think my husband feels the experience of pregnancy has hurt our relationship.

____ 42. I think my husband was satisfied with how much control he had over decisions made during my childbirth.

____ 43. I thought that the labor and delivery would be easier for me than they were.

____ 44. I think my husband felt embarrassed about my physical appearance during labor and delivery.

____ 45. Sexual activity or desire frequently decreases for the first 6-8 weeks after delivery. I worry about how this will affect our marriage in the long run.

____ 46. I think my husband feels that I could not have done as well during the childbirth without his assistance.

____ 47. I think my husband thought I lost control of myself emotionally during labor.

____ 48. I think the baby will have a good effect on our marriage.

____ 49. I think my husband thought that I did <u>not</u> deal with the physical pain during labor as well as other women do.

1 = agree completely
2 = agree on the whole
3 = agree slightly
4 = disagree slightly
5 = disagree on the whole
6 = disagree completely

____ 50. As a result of the labor and delivery experience, I think my husband felt that I don't cope very well with pain.

____ 51. I think my husband feels that he was as helpful as he could have been during the childbirth experience.

____ 52. I did things during labor and delivery that I am now embarrassed by.

____ 53. I think my husband thinks the baby will have a good effect on our marriage.

____ 54. I was satisfied with the relationship I had with my doctor during the childbirth experience.

____ 55. Sexual activity or desire frequently decreases for the first 6-8 weeks after delivery. I think my husband worries about how this will affect our relationship in the long run.

____ 56. I think my husband feels disappointed about my conduct during labor and delivery.

____ 57. As a result of my childbirth experience I feel less self-confident.

____ 58. My husband is spending as much time as he possibly can visiting me in the hospital.

There are probably important aspects of your childbirth experience that have not been covered by the questionnaire items. For the following questions, please describe your experiences as completely as you can. Most women feel satisfied about some aspects of their experience and disappointed about other aspects. Please answer as honestly as you can about your satisfactions and disappointments.

1. In what ways was the labor and delivery a satisfying experience for you? for your husband?

2. In what ways was the labor and delivery a disappointing experience for you? for your husband?

3. Describe how you and your husband feel about the kind of delivery you had (vaginal vs. cesarean).

THE BETTS QMI VIVIDNESS OF IMAGERY SCALE*

Instructions for doing test

The aim of this test is to determine the vividness of your imagery. The items of the test will bring certain images to your mind. You are to rate the vividness of each image by reference to the accompanying rating scale, which is shown at the bottom of the page. For example, if your image is 'vague and dim' you give it a rating of 5. Record your answer in the brackets provided after each item. Just write the appropriate number after each item. Before you turn to the items on the next page, familiarize yourself with the different categories on the rating scale. Throughout the test, refer to the rating scale when judging the vividness of each image. A copy of the rating scale will be printed on each page. Please do not turn to the next page until you have completed the items on the page you are doing, and do not turn back to check on other items you have done. Complete each page before moving on to the next page. Try to do each item separately independent of how you may have done other items.

Rating Scale

The image aroused by an item of this test may be:

Perfectly clear and as vivid as the actual experience — *Rating* 1

Very clear and comparable in vividness to the actual experience — *Rating* 2

Moderately clear and vivid — *Rating* 3

Not clear or vivid, but recognizable — *Rating* 4

Vague and dim — *Rating* 5

So vague and dim as to be hardly discernible — *Rating* 6

No image present at all, you only 'knowing' that you are thinking of the object — *Rating* 7

An example of an item on the test would be one which asked you to consider an image which comes to your mind's eye of a red apple. If your visual image was moderately clear and vivid you would check the rating scale and mark '3' in the brackets as follows:

Item	*Rating*
5 A red apple	(3)

Now turn to the next page when you have understood these instructions and begin the test.

Think of some relative or friend whom you frequently see, considering carefully the picture that rises before your mind's eye. Classify the images suggested by each of the following questions as indicated by the degrees of clearness and vividness specified on the Rating Scale.

Item	*Rating*
1. The exact contour of face, head, shoulders and body	( )
2. Characteristic poses of head, attitudes of body, etc.	( )
3. The precise carriage, length of step, etc. in walking	( )
4. The different colours worn in some familiar costume	( )

Think of seeing the following, considering carefully the picture which comes before your mind's eye; and classify the image suggested by the following question as indicated by the degree of clearness and vividness specified on the Rating Scale.

5. The sun as it is sinking below the horizon	( )

Think of each of the following sounds, considering carefully the image which comes to your mind's ear, and classify the images suggested by each of the following questions as indicated by the degrees of clearness and vividness specified on the Rating Scale.

Item	*Rating*
6. The whistle of a locomotive	( )
7. The honk of an automobile	( )
8. The mewing of a cat	( )
9. The sound of escaping steam	( )
10. The clapping of hands in applause	( )

Think of 'feeling' or touching each of the following, considering carefully the image which comes to your mind's touch, and classify the images suggested by each of the following questions as indicated by the degrees of clearness and vividness specified on the Rating Scale.

Item	*Rating*
11. Sand	( )
12. Linen	( )
13. Fur	( )
14. The prick of a pin	( )
15. The warmth of a tepid bath	( )

Perfectly clear and as vivid as the actual experience — *Rating* 1

Very clear and comparable in vividness to the actual experience — *Rating* 2

Moderately clear and vivid — *Rating* 3

Not clear or vivid, but recognizable — *Rating* 4

Vague and dim — *Rating* 5

So vague and dim as to be hardly discernible — *Rating* 6

No image present at all, you only 'knowing' that you are thinking of the object — *Rating* 7

Think of tasting each of the following considering carefully the image which comes to your mind's mouth, and classify the images suggested by each of the following questions as indicated by the degrees of clearness and vividness specified on the Rating Scale.

Item	*Rating*
21. Salt	( )
22. Granulated (white) sugar	( )
23. Oranges	( )
24. Jelly	( )
25. Your favourite soup	( )

Think of smelling each of the following, considering carefully the image which comes to your mind's nose and classify the images suggested by each of the following questions as indicated by the degrees of clearness and vividness specified on the Rating Scale.

Item	*Rating*
26. An ill-ventilated room	( )
27. Cooking cabbage	( )
28. Roast beef	( )
29. Fresh paint	( )
30. New leather	( )

Think of each of the following sensations, considering carefully the image which comes before your mind, and classify the images suggested as indicated by the degrees of clearness and vividness specified on the Rating Scale.

Item	*Rating*
31. Fatigue	( )
32. Hunger	( )
33. A sore throat	( )
34. Drowsiness	( )
35. Repletion as from a very full meal	( )

Dyadic Adjustment Scale

RELATIONSHIP QUESTIONNAIRE

Most persons have disagreements in their relationships. Please indicate below the approximate extent of agreement or disagreement between you and your partner for each item on the following list.

	Always Agree	Almost Always Agree	Occasionally Disagree	Frequently Disagree	Almost Always Disagree	Always Disagree
1. Handling family finances	___	___	___	___	___	___
2. Matters of recreation	___	___	___	___	___	___
3. Religious matters	___	___	___	___	___	___
4. Demonstrations of affection	___	___	___	___	___	___
5. Friends	___	___	___	___	___	___
6. Sex relations	___	___	___	___	___	___
7. Conventionality (correct or proper behavior)	___	___	___	___	___	___
8. Philosophy of life	___	___	___	___	___	___
9. Ways of dealing with parents or inlaws	___	___	___	___	___	___
10. Aims, goals, and things believed important	___	___	___	___	___	___
11. Amount of time spent together	___	___	___	___	___	___
12. Making major decisions	___	___	___	___	___	___
13. Household tasks	___	___	___	___	___	___
14. Leisure time interests and activities	___	___	___	___	___	___
15. Career decisions	___	___	___	___	___	___

	All the time	Most of the time	More often than not	Occasionally	Rarely	Never
16. How often do you discuss or have you considered divorce, separation, or terminating your relationship?	___	___	___	___	___	___
17. How often do you or your mate leave the house after a fight?	___	___	___	___	___	___
18. In general, how often do you think that things between you and your partner are going well?	___	___	___	___	___	___
19. Do you confide in your mate?	___	___	___	___	___	___
20. Do you ever regret that you married?	___	___	___	___	___	___
21. How often do you and your partner quarrel?	___	___	___	___	___	___
22. How often do you and your mate get on each other's nerves?	___	___	___	___	___	___

	Every Day	Almost Every Day	Occasionally	Rarely	Never
23. Do you kiss your mate?	___	___	___	___	___
24. Do you and your mate engage in outside interests together?	___	___	___	___	___

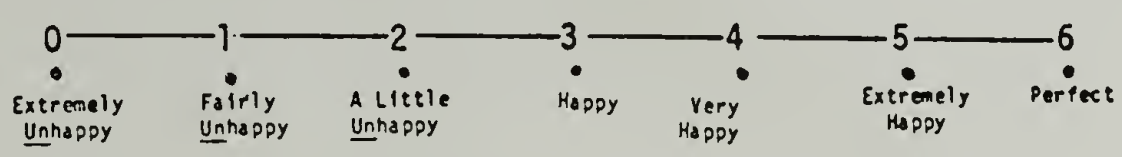
How often would you say the following events occur between you and your mate?

	Never	Less than once a month	Once or twice a month	Once or twice a week	Once a day	More often
25. Have a stimulating exchange of ideas	___	___	___	___	___	___
26. Laugh together	___	___	___	___	___	___
27. Calmly discuss something	___	___	___	___	___	___
28. Work together on a project	___	___	___	___	___	___

These are some things about which couples sometimes agree and sometimes disagree. Indicate if either item below caused differences of opinions or were problems in your relationship during the past few weeks. (Check yes or no)

	YES	NO
29. Being too tired for sex	___	___
30. Not showing love	___	___

31. The dots on the following line represent different degrees of happiness in your relationship. The middle point, "happy" represents the degree of happiness of most relationships. Please circle the dot which best describes the degree of happiness, all things considered, of your relationship.



32. Which of the following statements best describes how you feel about the future of your relationship?

___ I want desperately for my relationship to succeed, and would go to almost any length to see that it does.

___ I want very much for my relationship to succeed, and will do all that I can to see that it does.

___ I want very much for my relationship to succeed, and will do my fair share to see that it does.

___ It would be nice if my relationship succeeded, but I can't do much more than I am doing now to help it succeed.

___ It would be nice if it succeeded, but I refuse to do any more than I am doing now to keep the relationship going.

___ My relationship can never succeed, and there is no more that I can do to keep the relationship going.

CHECK LIST

DACL FORM B

By Bernard Lubin

Name_____ Age_____ Sex_____

Date_____ Highest grade completed in school_____

DIRECTIONS: Below you will find words which describe different kinds of moods and feelings. Check the words which describe How You Feel Now - - Today. Some of the words may sound alike, but we want you to check all the words that describe your feelings. Work rapidly and check all of the words which describe how you feel today.

1. ☐ Downhearted
2. ☐ Lively
3. ☐ Unfeeling
4. ☐ Alone
5. ☐ Unhappy
6. ☐ Alive
7. ☐ Terrible
8. ☐ Poor
9. ☐ Forlorn
10. ☐ Alert
11. ☐ Exhausted
12. ☐ Heartsick
13. ☐ Bright
14. ☐ Glum
15. ☐ Desolate
16. ☐ Composed
17. ☐ Clean
18. ☐ Dispirited
19. ☐ Moody
20. ☐ Pleased
21. ☐ Dead
22. ☐ Sorrowful
23. ☐ Bleak
24. ☐ Light
25. ☐ Morbid
26. ☐ Heavy-hearted
27. ☐ Easy-going
28. ☐ Gray
29. ☐ Melancholy
30. ☐ Hopeful
31. ☐ Mashed
32. ☐ Unlucky

MATERNAL SELF-REPORT INVENTORY

Please note how accurately the following statements describe how you feel. Read each item carefully and when you are sure you understand it, indicate your answer by drawing a circle around the answer which best expresses the degree to which the statement is true for you.

Rate each statement as follows:

CF	MF	UN	MT	CT
Completely False	Mainly False	Uncertain or Neither True or False	Mainly True	Completely True

For example, circle CF if you feel that statement is completely false, circle MF if the statement is mainly false, circle MT if the statement is mainly true, and circle CT if the statement is completely true. If you are uncertain or feel that the statement is neither true nor false, then circle UN.

Please answer each item as honestly as you can, and work rapidly as first impressions are as good as any. Try to answer every question, and if in doubt, circle the answer which comes closest to expressing your feelings. Although some of the statements seem to be similar, they are not identical, and should be rated separately. All of your answers will be treated with complete confidentiality. There are no right or wrong answers, so please answer according to your own feelings. If you have any questions or comments to make, please feel free to note them at the end of the questionnaire. Your comments are very much appreciated.

Thank you very much

CF Completely False	MF Mainly False	UN Uncertain or Neither True or False	MT Mainly True	CT Completely True

1. I feel confident about being able to know what my baby wants. CF MF UN MT CT
2. I think that I will be a good mother. CF MF UN MT CT
3. I am confident that I will have a close and warm relationship with my baby. CF MF UN MT CT
4. I feel reasonably competent in taking care of my new baby. CF MF UN MT CT
5. In general, I don't worry about my own health interfering with my ability to care for my baby. CF MF UN MT CT
6. I doubt that I will be able to satisfy my baby's emotional needs. CF MF UN MT CT
7. I often worry that I may be forgetful and cause something bad to happen to my baby. CF MF UN MT CT
8. I have mixed feelings about being a mother. CF MF UN MT CT
9. I feel emotionally prepared to take good care of my baby. CF MF UN MT CT
10. I am enthusiastic about taking responsibility for caring for my baby. CF MF UN MT CT
11. I worry that I will not know what to do if my baby gets sick. CF MF UN MT CT
12. I feel that I have lots of love to give to my baby. CF MF UN MT CT
13. I am frightened about all the day-to-day responsibilities of having to care for my baby. CF MF UN MT CT
14. I feel somewhat anxious about all the things a mother must do. CF MF UN MT CT
15. I worry about being able to fulfill my baby's emotional needs. CF MF UN MT CT
16. I have no anxieties about all the things mothers have to do. CF MF UN MT CT

THANK YOU FOR YOUR PARTICIPATION IN THIS STUDY. YOUR RESPONSES SHOULD HELP US BETTER UNDERSTAND THE CHILDBIRTH EXPERIENCE AND THE TRANSITION TO PARENTHOOD. IF YOU WOULD LIKE A SUMMARY OF THE STUDY FINDINGS MAILED TO YOU AFTER THE STUDY IS COMPLETED, CHECK HERE ____.

PLEASE CHECK HERE ____ IF YOU ARE WILLING TO BE CONTACTED WITHIN THE NEXT YEAR FOR SOME FOLLOW-UP INFORMATION.

NAME _____
ADDRESS _____
_____
_____
PHONE _____

LIFE EVENTS QUESTIONNAIRE

Following is a list of life events. Place an "X" next to the events which you and/or your wife have experienced during the past year.

Do not mark here	
___	____ 1. Marriage
___	____ 2. Troubles with the boss
___	____ 3. Detention in jail or other institution
___	____ 4. Death of spouse
___	____ 5. Major change in sleeping habits (a lot more or a lot less sleep, or change in part of day when asleep)
___	____ 6. Death of a close family member
___	____ 7. Major change in eating habits (a lot more or a lot less food intake, or very different meal hours or surroundings
___	____ 8. Foreclosure on a mortgage or loan
___	____ 9. Revision of personal habits (dress, manners, associations, etc.)
___	____ 10. Death of a close friend
___	____ 11. Minor violations of the law (e.g. traffic tickets, jay walking, disturbing the peace, etc.)
___	____ 12. Outstanding personal achievement
___	____ 13. Pregnancy
___	____ 14. Major change in the health or behavior of a family member
___	____ 15. Sexual difficulties
___	____ 16. In-law troubles
___	____ 17. Major change in number of family get-togethers (e.g. a lot more or a lot less than usual)
___	____ 18. Major change in financial state (e.g. a lot worse off or a lot better off than usual)
___	____ 19. Gaining a new family member (e.g. through birth, adoption, oldster moving in etc.)
___	____ 20. Change in residence
___	____ 21. Son or daughter leaving home (e.g. marriage, attending college, etc.)
___	____ 22. Marital separation from mate
___	____ 23. Major change in church activities (e.g. a lot more or a lot less than usual)
___	____ 24. Marital reconciliation with mate
___	____ 25. Being fired from work
___	____ 26. Divorce
___	____ 27. Changing to a different line of work
___	____ 28. Major change in the number of arguments with spouse (e.g. either a lot more or a lot less than usual regarding childrearing, personal habits, etc.)
___	____ 29. Major change in responsibilities at work (e.g. promotion, demotion, lateral transfer)
___	____ 30. Wife beginning or ceasing work outside the home

___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___ ___

___31. Major change in working hours or conditions
___32. Major change in type and/or amount of recreation
___33. Taking on a mortgage greater than $10,000 (e.g. purchasing a home, business, etc.)
___34. Taking on a mortgage or loan less than $10,000 (e.g. purchasing a car, TV, freezer, etc.)
___35. Major personal injury or illness
___36. Major business readjustment (e.g. merger, reorganization, bankruptcy, etc.)
___37. Major change in social activities (e.g. clubs, dancing, movies, visiting, etc.)
___38. Major change in living conditions (e.g. building a new home, remodeling, deterioraton of home or neighborhood)
___39. Retirement from work
___40. Vacation
___41. Christmas
___42. Changing to a new school
___43. Beginning or ceasing formal schooling

____B

CHILDBIRTH PERCEPTIONS QUESTIONNAIRE

Please respond to the following questions using the scale below. For each statement, choose the answer which best describes how you feel. Place the number you choose in the space preceding each statement. Please be sure to answer every question. It is important that you answer this without asking your wife about her perceptions.

1 = agree completely

2 = agree on the whole

3 = agree slightly

4 = disagree slightly

5 = disagree on the whole

6 = disagree completely

____ 1. I feel satisfied with my wife's conduct during labor and delivery.

____ 2. I think my wife lost control of herself emotionally during labor.

____ 3. I think my wife did not deal with the physical pain during labor as well as other women do.

____ 4. I felt embarrassed about my wife's physical appearance during pregnancy.

____ 5. I am satisfied with the way my wife delivered (vaginal or cesarean).

____ 6. I am concerned that my wife will not be as physically attractive as she was before she had a baby.

____ 7. As a result of the childbirth experience, my respect for my wife has gone up.

____ 8. Sexual activity or desire frequently decreases for the first 6-8 weeks after delivery. I worry about how this will affect the next few months.

____ 9. I think that I was aware of my wife's needs during the childbirth experience.

____10. I feel disappointed about my wife's conduct during labor and delivery.

____11. I felt emotionally close to my wife during labor.

____12. I think the experience of pregnancy has strengthened my relationship with my wife.

1 = agree completely
2 = agree on the whole
3 = agree slightly
4 = disagree slightly
5 = disagree on the whole
6 = disagree completely

_____13. I was satisfied with how much control I had over decisions made during my wife's childbirth.

_____14. My wife could not have done as well during the childbirth without my assistance.

_____15. I am satisfied with the amount of drugs/medication my wife used during labor and delivery.

_____16. I am worried that the baby will in some ways have a bad effect on my relationship with my wife.

_____17. I am disappointed by my wife's childbirth experience.

_____18. As a result of the labor and delivery experience, I feel my wife does not cope very well with pain.

_____19. I feel that I was as helpful as I could have been during the childbirth experience.

_____20. I am satisfied with how my wife and I communicated during labor.

_____21. I felt embarrassed about my wife's physical appearance during labor and delivery.

_____22. Sexual activity or desire frequently decreases for the first 6-8 weeks after delivery. I worry about how this will affect our marriage in the long run.

_____23. I think the baby will have a good effect on our marriage.

_____24. My wife did things during labor and delivery that I am now embarrassed by.

_____25. I was satisfied with the relationship I had with the doctor during labor and delivery.

_____26. As a result of the childbirth experience I have less confidence in my wife.

_____27. I think the experience of pregnancy has hurt my relationship with my wife.

_____28. I thought the labor and delivery would be easier for my wife than they were.

_____29. I am spending as much time as I possibly can visiting my wife in the hospital.

Dyadic Adjustment Scale
RELATIONSHIP QUESTIONNAIRE

Most persons have disagreements in their relationships. Please indicate below the approximate extent of agreement or disagreement between you and your partner for each item on the following list.

	Always Agree	Almost Always Agree	Occasionally Disagree	Frequently Disagree	Almost Always Disagree	Always Disagree
1. Handling family finances	___	___	___	___	___	___
2. Matters of recreation	___	___	___	___	___	___
3. Religious matters	___	___	___	___	___	___
4. Demonstrations of affection	___	___	___	___	___	___
5. Friends	___	___	___	___	___	___
6. Sex relations	___	___	___	___	___	___
7. Conventionality (correct or proper behavior)	___	___	___	___	___	___
8. Philosophy of life	___	___	___	___	___	___
9. Ways of dealing with parents or inlaws	___	___	___	___	___	___
10. Aims, goals, and things believed important	___	___	___	___	___	___
11. Amount of time spent together	___	___	___	___	___	___
12. Making major decisions	___	___	___	___	___	___
13. Household tasks	___	___	___	___	___	___
14. Leisure time interests and activities	___	___	___	___	___	___
15. Career decisions	___	___	___	___	___	___

	All the time	Most of the time	More often than not	Occasionally	Rarely	Never
16. How often do you discuss or have you considered divorce, separation, or terminating your relationship?	___	___	___	___	___	___
17. How often do you or your mate leave the house after a fight?	___	___	___	___	___	___
18. In general, how often do you think that things between you and your partner are going well?	___	___	___	___	___	___
19. Do you confide in your mate?	___	___	___	___	___	___
20. Do you ever regret that you married?	___	___	___	___	___	___
21. How often do you and your partner quarrel?	___	___	___	___	___	___
22. How often do you and your mate get on each other's nerves?	___	___	___	___	___	___

	Every Day	Almost Every Day	Occasionally	Rarely	Never
23. Do you kiss your mate?	___	___	___	___	___
24. Do you and your mate engage in outside interests together?	___	___	___	___	___

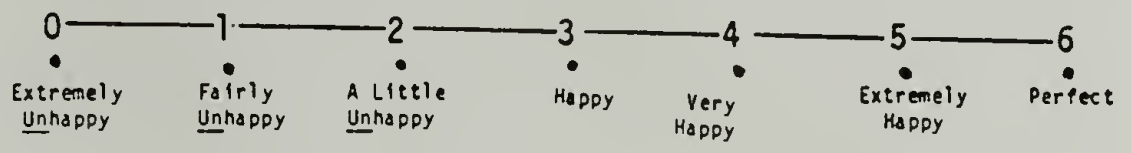
How often would you say the following events occur between you and your mate?

	Never	Less than once a month	Once or twice a month	Once or twice a week	Once a day	More often
25. Have a stimulating exchange of ideas	___	___	___	___	___	___
26. Laugh together	___	___	___	___	___	___
27. Calmly discuss something	___	___	___	___	___	___
28. Work together on a project	___	___	___	___	___	___

These are some things about which couples sometimes agree and sometimes disagree. Indicate if either item below caused differences of opinions or were problems in your relationship during the past few weeks. (Check yes or no)

	YES	NO
29. Being too tired for sex	___	___
30. Not showing love	___	___

31. The dots on the following line represent different degrees of happiness in your relationship. The middle point, "happy" represents the degree of happiness of most relationships. Please circle the dot which best describes the degree of happiness, all things considered, of your relationship.



32. Which of the following statements best describes how you feel about the future of your relationship?

___ I want desperately for my relationship to succeed, and would go to almost any length to see that it does.

___ I want very much for my relationship to succeed, and will do all that I can to see that it does.

___ I want very much for my relationship to succeed, and will do my fair share to see that it does.

___ It would be nice if my relationship succeeded, but I can't do much more than I am doing now to help it succeed.

___ It would be nice if it succeeded, but I refuse to do any more than I am doing now to keep the relationship going.

___ My relationship can never succeed, and there is no more that I can do to keep the relationship going.

SELF-EVALUATION QUESTIONNAIRE

Developed by Charles D. Spielberger
in collaboration with
R. L. Gorsuch, R. Lushene, P. R. Vagg, and G. A. Jacobs

STAI Form Y-1

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then blacken in the appropriate circle to the right of the statement to indicate how you feel *right* now, that is, *at this moment*. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

	NOT AT ALL	SOMEWHAT	MODERATELY SO	VERY MUCH SO
1. I feel calm	①	②	③	④
2. I feel secure	①	②	③	④
3. I am tense	①	②	③	④
4. I feel strained	①	②	③	④
5. I feel at ease	①	②	③	④
6. I feel upset	①	②	③	④
7. I am presently worrying over possible misfortunes	①	②	③	④
8. I feel satisfied	①	②	③	④
9. I feel frightened	①	②	③	④
10. I feel comfortable	①	②	③	④
11. I feel self-confident	①	②	③	④
12. I feel nervous	①	②	③	④
13. I am jittery	①	②	③	④
14. I feel indecisive	①	②	③	④
15. I am relaxed	①	②	③	④
16. I feel content	①	②	③	④
17. I am worried	①	②	③	④
18. I feel confused	①	②	③	④
19. I feel steady	①	②	③	④
20. I feel pleasant	①	②	③	④

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