Perceptions of Telephone Interventions for Postpartum Depression

By

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May 2004
To the faculty of Washington State University:

The members of the Committee appointed to examine the project of Brenda A. Shanley find it satisfactory and recommend that it be accepted.

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Kathryn Records, Ph.D., RN
Margaret Jones, MN, ARNP, CS
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Thank you Carrie Holliday for the continued support, guidance, and reassurance throughout my program of study. You truly are a wonderful friend. Thank you to the library staff for all your help, guidance and knowledge.

Thank you to my daughters Taylor and Brooke for the constant reminder of the important things in life and the drive to keep on going. I love you two.
Perceptions of Telephone Interventions for Postpartum Depression

By
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Washington State University
May 2004

Abstract

Chair: Dr. Michael Rice

Postpartum depression (PPD) is a condition that describes a range of physical and emotional changes that many mothers have after delivering a baby. PPD can develop after the birth of any child, not just the first child. A woman can have feelings similar to the baby blues—sadness, despair, anxiety, and irritability—but feels them much more strongly than she would with the baby blues.

The purpose of this project is to discover the perceived effect of telephone contact in a sample of women with PPD and the women’s thoughts about what interventions were most helpful. This project is a follow up NINR study R15 NR05311-01A2 by Records & Rice (2002-2005) entitled “Childbearing Health of Abused and Non Abused Women.” As part of the original protocol, women who had elevated depression scores postpartum, on either the Edinburgh Postnatal Depression Inventory (EPDI) or the Centers for Epidemiologic Studies Depressed Mood Scale (CES-D) at any point in the 10-month longitudinal study received follow up assessment by telephone and, if needed, referral for intervention. The focus of this study is to identify women’s perception of telephone calls and interventions received for their PPD.
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Perceptions of Telephone Interventions for Postpartum Depression

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Washington State University
Intercollegiate College of Nursing
May 2004
Perceptions of Telephone Interventions for Postpartum Depression

Phenomenon of Interest

Postpartum depression (PPD) is a condition that describes a range of physical and emotional changes that many mothers have after delivering a baby. PPD can be found in 10-15% of deliveries and mostly occurs several weeks or months after delivery with symptoms of depressive mood, sleeping disorders, anxiety, loss of interest and accord, and feelings ranging from guilt to suicidal ideas (Kemp, Bongartz, & Rath, 2003). PPD can develop after the birth of any child, not just the first child. A woman can have feelings similar to the baby blues—sadness, despair, anxiety, and irritability— but feels them much more strongly than she would with the baby blues. PPD often keeps a woman from doing the things she needs to do every day (Schmidt, 2002).

PPD affects women of all ages, economic status, and racial/ethnic backgrounds. Research has shown that women with depression are more at risk for PPD than women who have not had a history of depression, however this is not a definitive predictor. No one knows for sure what causes PPD. Hormonal changes in a woman’s body may trigger symptoms of PPD. Estrogen and progesterone increase throughout a women’s pregnancy, then suddenly drop to normal pre-pregnancy levels after delivery. Thyroid levels may also drop sharply after delivery, causing depression-like symptoms. Contributors to PPD include: feeling tired after delivery, broken sleep patterns, lack of rest, feeling stress from changes in work and home routines, feeling overwhelmed with new baby responsibilities, feelings of loss, and less free time.

Signs of PPD include: feeling restless or irritable, feeling sad, depressed, crying a lot, having no energy, headaches, chest pain, heart palpitations and numbness. Hyperventilation, insomnia, extreme tiredness, unable to eat with subsequent weight loss or overeating with weight gain, trouble focusing, remembering or making decisions are also signs of PPD.
Being overly worried about the baby or lack of interest in the baby, feelings of worthlessness or guilt, fear of hurting the baby or self, and lack of interest or pleasure in activities, including sex are other signs of PPD (Schmidt, 2002).

Treatment of PPD depends on how severe it is. PPD can be treated with medications, often antidepressants, and psychotherapy (Rice, Records, & Williams, 2002). It is very important for women with PPD to get adequate rest, eat well-balanced meals, gain support from partner, family, friends and a support group, and seek medical treatment from a mental health professional who specializes in treatment of PPD (Schmidt, 2002).

The purpose of this project is to discover the perceived effect of telephone contact in a sample of women with PPD and the women’s thoughts about what was most helpful for interventions. This project is a follow up NINR study R15 NR05311-01A2 by Records and Rice (2002-2005) entitled “Childbearing Health of Abused and Non Abused Women.” The parent study used a longitudinal descriptive design to follow women from third trimester to 8 months postpartum. The larger investigation was designed to:

1. investigate the relationship between previous or current abuse and postpartum depression
2. describe the changes in abuse and depression during the prenatal and postpartum periods
3. and test for differences in childbearing outcomes for abused and non-abused women

As part of the original protocol, women who had elevated depression scores postpartum, on either the Edinburgh Postnatal Depression Inventory (EPDI) or the Centers for Epidemiologic Studies Depressed Mood Scale (CES-D) at any point in the 10-month longitudinal study received follow up assessment by telephone and, if needed, referral for intervention. The focus of this study is to identify women’s perception of telephone calls and interventions received for their PPD.
Literature Review

Currently there are no investigations specifically related to the patient's perception of telephone contact as an intervention in PPD. However, the literature reviewed does contain several studies on the use of phone contact in primary care to follow up on major depression (Table 1).

<table>
<thead>
<tr>
<th>Author/Year</th>
<th>Sample</th>
<th>Conceptual Focus</th>
<th>Intervention</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Simon, G.E., et al. 2002</td>
<td>N=190</td>
<td>Prevent depression relapse in primary care</td>
<td>Telephone assessment at 6-8 weeks; outcomes assessed via blinded telephone assessments at 3, 6, 9, 12 months via SCL-90</td>
<td>Patients received 13.9 additional depression-free days in 12 month period; modest increased treatment cost.</td>
</tr>
<tr>
<td>2. Lynch, D.J., et al. 1997</td>
<td>N=15</td>
<td>Telephone counseling for minor depression in a family practice setting</td>
<td>6 therapy sessions via telephone 1x weekly for 26 min. HAM-D, Beck Depression Inventory, Duke Health Profile and Problem Solving Inventory scales were used.</td>
<td>Reduction in HAM-D scores (t=1.90); Decreased Beck Depression Inventory scores (t=2.27)</td>
</tr>
<tr>
<td>3. Tutty, S., et al. 2000</td>
<td>N=26</td>
<td>Telephone counseling as an adjunct to Antidepressant Treatment in Primary care</td>
<td>Pt's received written materials on depression, 6 weekly counseling sessions by telephone. Beck Depression Inventory used. Follow up at 3, 6 months</td>
<td>Lower depressive symptoms (0.89 vs. 1.13) at 3 months; (0.79 vs. 0.95 at 6 months)</td>
</tr>
<tr>
<td>5. Hunkeler, E.M., et. al. 2000</td>
<td>N=302</td>
<td>Nurse telehealth care in treatment of depression in primary care</td>
<td>HAM-D, Beck Depression Inventory; follow up at 6-weeks &amp; 6-months</td>
<td>50% improvement on HAM-D at 6-weeks (50% vs. 37%); 6-month (57% vs. 38%) and Beck Depression inventory at 6 months (48% vs. 37%).</td>
</tr>
<tr>
<td>6. Piette, J.D., et al. 1999</td>
<td>N=280</td>
<td>Effects of Automated calls with telephone nurse follow-up on outcomes (mental health) of Diabetes care</td>
<td>Bi-weekly automated telephone disease mgmt w/telephone follow-up by diabetes nurse. Outcomes measured at 12-months via telephone interview via CESD &amp; RAND Scale.</td>
<td>Fewer symptoms of depression (P=0.023), greater self-efficacy w/self care activities (P=0.006), and fewer days in bed due to illness (P=0.026).</td>
</tr>
<tr>
<td>7. Simon, G.E., et al. 2000</td>
<td>N=613</td>
<td>Monitoring, feedback &amp; mgmt of care by telephone to improve trat of depression in primary care.</td>
<td>Interviews by telephone at 3 &amp; 6 month; Hopkins Symptom checklist</td>
<td>50% improvement in depression scores (2.22, 1.31 to 3.75), lower mean depression scores at follow-up and lower probability of major depression at follow-up (0.46, 0.24, to 0.86)</td>
</tr>
<tr>
<td>8. Datto, C.J., et al. 2003</td>
<td>N=61</td>
<td>Telephone disease mgmt program for depression</td>
<td>Baseline, every 3-week follow-up contact and formal evals at 6 and 12 weeks. CES-D scale.</td>
<td>CES-D scores &lt;16 by week 16 (66.7 vs. 33.3%, p=0.05)</td>
</tr>
<tr>
<td>9. Beebe L.H. 2001</td>
<td>N=48</td>
<td>Community nursing support for clients with schizophrenia via telephone calls</td>
<td>Weekly phone calls for 3 months to follow-up using BPRS</td>
<td>Lower rates of rehospitalization, fewer and shorter readmissions, and longer community survival than control subjects</td>
</tr>
</tbody>
</table>

Reports on the use of follow up contact with major depression in primary care note that telephone follow up interventions are beneficial and decrease the severity of depression (Table 1). The above mentioned studies show reduction in Hamilton Depression Scale (HAM-D) scores (Hunkeler et al., 2000; Lynch, Tamburrino, & Nagel, 1997; Mohr et al., 2000) decreased Beck Depression Inventory (BDI) scores (Hunkeler et al., 2000; Lynch et. al., 1997; Tutty, Simon, & Ludman, et al., 2000), and lower depressive symptoms. Depression scores were lowered from pre to post-treatment and patients had greater self-
efficacy with self-care activities along with decreased CES-D scores (Datto, Thompson, Horowitz, Disbot, & Oslin, 2003; Piette, Weinberger, & McPhee, 1999).

Reports also indicate that telephone contact is a cost effective method of intervention with major depression in primary care. One report showed a decrease in re-hospitalization, shorter readmissions, and longer community survival for patients receiving intervention as compared to control group patients (Beebe, 2001). The outcome is decreased health care costs. Postpartum, however, is a period that is largely defined as one of social well being. No reports could be found on the use of telephone contact to follow up for postpartum depression.

Theoretical Perspective

Sister Callista Roy developed the Roy Adaptation Model, which is based on the belief that the human being is an open system. The Adaptation Model is described as:

"a system that responds to environmental stimuli through the cognator and regulator coping mechanisms. The responses occur through at least one of four modes—physiological-physical, self-concept-group identity, role function, and interdependence. The responses in these modes are usually visible to others and can be identified as adaptive or ineffective. Adaptive behaviors that need support and ineffective behaviors are then analyzed to identify the associated stimuli. The major stimulus leading to one of these behaviors is the focal stimulus; other stimuli that are verified as being involved are contextual, and stimuli that might be involved but have not been verified are residual. In nursing, care focuses on altering stimuli or strengthening adaptive processes to result in adaptive behaviors." (George, 2003, para. 1)

A second explanation of Roy’s Adaptive Model states, “the person is an open adaptive system with input (stimuli), who adapts by processes or control mechanisms (throughput)” (Hagopian, 2003, slide 56).

Theoretically, the investigators’ telephone interventions were a form of environmental stimuli that triggered cognator and regulator coping mechanisms. The responses occurred through the subject’s altered self-concept. The subject’s responses,
whether adaptive or ineffective, were the focus of this investigation. Using the telephone as an intervention in PPD to contact women, assess, intervene, and refer, if needed, may create awareness for potential PPD. Interviewing postpartum women at specific intervals to assess mood may be a positive tool for continual assessment, intervention, and possible referral to mental health professionals.

**Method**

This study will use a content analysis of interviews of the women in the larger parent study who had elevated PPD scores. Content analysis is a research technique for making replication and valid inferences from data to their context. The purpose of content analysis is to provide knowledge, new insights, a representation of facts, and a practical guide to action (Krippendorff, 1980).

According to Riffe, Lacy, and Fico (1998), quantitative content analysis is the systematic and replicable examination of symbols of communication, which have been assigned numeric values according to valid measurement rules, and the analysis of relationships involving those values using statistical methods, in order to describe the communication, draw inferences about its meaning, or infer from the communication to its context, both of production and consumption. The framework is intended to serve three purposes: prescriptive, analytical, and methodological. It is prescriptive in the sense that it should guide the conceptualization and the design of practical content analyses for any given circumstance; analytical in the sense that is should facilitate the critical examination of content analysis results obtained by others; and methodological in the sense that it should direct the growth and systematic improvement of methods for content analysis (Krippendorff, 1980).
Design

This study used a survey design post telephone intervention for women with PPD. Women who have participated in the parent study and who had elevated EPDI and CES-D scores, indicative of PPD, were later telephoned at their homes, and further interviewed.

This study used open ended interviews combined with thematic analysis to answer the following questions:

RQ1: What do women experiencing PPD identify as the most helpful intervention?
RQ2: What is the relationship between telephone calls, the patient’s perception of calls, and postpartum depression?
RQ3: What are women’s perceptions of telephone calls as an intervention for PPD?

After the interview process, data from each interview question was reviewed. Reviewed data was placed into similar categories, assigned numeric values, and later correlated.

Setting for Study

The study sample for the parent NINR study was drawn from the practices of obstetricians, midwives, and family practice physicians in the Spokane area. Women who were in their last trimester of pregnancy were recruited into the study as they attended their prenatal health care appointments. Trained data collectors and interviewers approached subjects in the waiting room and informed consent was obtained. Subjects then completed depression and abuse surveys. After delivery, women received telephone calls or mailings of surveys at 2,4,6, and 8 months postpartum. Women who had elevated postpartum depression scores (EPDI > 12; CES-D > 16) at any point in the 10-month longitudinal study, were screened as depressed and received follow up assessment, intervention and referral by the co-investigator, a psychiatric nurse practitioner.
In the current study, the participants who had completed the initial study and who had elevated postpartum depression scores at one or more data collection time points in the parent study were sent letters by mail to their home address explaining the purpose and process of the follow up study. Subjects who were interested in participating mailed back their signed consent form (See Appendix B) and current telephone number.

**Population and Sample**

The parent study population and sample consisted of subjects in their last trimester of pregnancy. Subjects had to be 18 years of age or older, and be able to speak/read English.

The current sample consisted of women who participated in the parent NINR study and who had elevated postpartum depression scores at some point in the 10-month longitudinal study. The participants were screened as depressed and received follow up assessment, intervention, and referral if desired. All subjects in the present study had completed their participation in the parent study and, therefore, were at least 8 months postpartum.

**Data Collection Procedure**

Data were collected from participants by telephone interviews, in their own homes. The interviews were tape recorded and later transcribed. The interviewer documented the patient’s experience of the telephone calls regarding the effectiveness of the phone intervention on depression. The patient’s experiences were documented in narrative form, as in qualitative studies, where the emphasis is on an individual’s subjective experience. The 15 questions used in the current study were open-ended and created by the investigator for this study. The focused questions were designed to discover the patient’s perception and the effectiveness of telephone interview as an intervention in postpartum depression. A qualitative researcher, and an expert in women’s health, reviewed the questions for form and content. (See Appendix A for copy of the interview questionnaire).
Reliability/Validity

Reliability is the extent to which a measuring procedure yields the same results on repeated trials. In content analysis reliability is established by intercoder reliability and trustworthiness. The central feature of these efforts is to confirm that the findings accurately reflect the experiences and viewpoints of participants, rather than perceptions of the researcher. When human coders are used in content analysis, this translates to intercoder reliability or the amount of agreement or correspondence among two or more coders. Trustworthiness is established by having an expert qualitative researcher review the data for form, content, and accuracy. The goal of content analysis is to identify and record relatively objective characteristics of messages, therefore, reliability is paramount (Neuendorf, 2002).

Validity is the extent to which a measuring procedure represents the intended concept. In content analysis, a measurement is valid if it measures what it is designed to measure, and content analysis is considered valid to the extent its inferences are upheld in the face of independently obtained evidence (Neuendorf, 2002). Validity is strengthened by concept validity and by having an expert qualitative researcher review the contents.

Data Analysis

Data were analyzed using content analysis. Content analysis is a research technique for making replication and valid inferences from data to their context. The purpose of content analysis is to provide knowledge, new insights, a representation of facts, and a practical guide to action (Krippendorff, 1980). Data were assigned numeric values according to themes and categories identified. Frequencies and correlations would then be used to describe the responses of the participants and the relationships between the variables.

Human Subjects Considerations

This project is a follow-up study taken from a larger NINR study, R15 NR05311-01A2, by Records and Rice entitled “Childbearing Health of Abused and Non Abused
A protocol modification was made which expanded the larger longitudinal NINR study to include the effectiveness and perceptions of telephone interventions on postpartum depression. Human subjects approval was granted by the thesis committee of Washington State University, Intercollegiate College of Nursing and the Washington State University Institutional Review Board (See Appendix C).

Potential risks and discomforts discussed with subjects prior to participation were uncomfortable feelings of triggered memories and emotional issues. These risks and discomforts were decreased because the data collector was a registered nurse with graduate level psychiatric nurse practitioner training and was trained to stop the interview process if issues emerged that engendered distraught. Further, the researcher was ready to offer the subject the opportunity to withdraw from the study, if necessary. Subjects were able to contact a licensed psychiatric nurse practitioner for referral, if they wanted someone else to talk to or if they had a strong emotional reaction to any of the study questions. Participants were able to discontinue the study at any time. If subjects chose to withdraw, the relationship with their health care provider was not affected in any way. Subjects were able to answer as many or as few of the questions as they chose. The subject’s decision to participate was completely voluntary.

Confidentiality and privacy were guaranteed by giving each subject a participation study number. All personal information was protected and referenced according to the study number. Study numbers and names were kept in separate files, and were available only to the research team as needed. All research information and personal identifying information were kept in locked files that were accessible only to the research team. When results were reported, they were reported as group data. Individual identifiers were not revealed.

There are many benefits of participating in this research study. One benefit is the good feeling of helping researchers to learn more about postpartum depression and to
discover interventions that help with treatment of PPD. Another benefit to participating in this research study is the ongoing follow up care participants received by the research team, which potentially will improve the participants' outcome to PPD. Society and other patients who suffer from PPD will also benefit from this research study, as a result of increased awareness, education, and knowledge that this study creates.

Results

Requests for participation and consent forms were mailed to 15 women who previously participated in the NINR study R15 NR05311-01A2 by Records & Rice (2002-2005) entitled “Childbearing Health of Abused and Non Abused Women,” and who had elevated depression scores. The mailings resulted in a very small return ($n = 3$). Only three participants voluntarily consented to have follow up telephone calls and completed the interview process.

Subject Characteristics

All participants were Caucasian females. The average age of participants was 29.6. Two participants were married. One participant had an unknown marital status. All participants denied a history of psychiatric illness, including a prior postpartum depression. Two participants reported a history of physical abuse (Table 2). One participant reported physical abuse by a non-relative and the other participant reported physical abuse by a relative in addition to a non-relative. Only one participant reported a history of sexual abuse by a relative and a non-relative (Table 3).

<table>
<thead>
<tr>
<th>Table 2: Relationship of Perpetrator of Physical Abuse</th>
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<tbody>
<tr>
<td><strong>Frequency</strong></td>
</tr>
<tr>
<td>No Physical Abuse</td>
</tr>
<tr>
<td>Abuse by non-relative</td>
</tr>
<tr>
<td>Abuse by Relative and Non Relative</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>
Table 3: Relationship of Perpetrator of Sexual Abuse

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Sexual Abuse</td>
<td>2</td>
<td>66.7</td>
<td>66.7</td>
</tr>
<tr>
<td>Abuse by Relative</td>
<td>1</td>
<td>33.3</td>
<td>33.3</td>
</tr>
<tr>
<td>Non Relative</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Only one participant had a planned pregnancy, although all participants reported that they and their partners were happy about the pregnancy. The average week that gestational care began was 9.6. Gravida, para, spontaneous abortion (SAB) and therapeutic abortion (TAB) numbers varied. Participant one was gravida 3, para 1, SAB 1, TAB 0. Participant two was gravida 6, para 2, SAB 1, TAB 2, and participant three was gravida 2, para 1, SAB 0, and TAB 0.

**Thematic Analysis**

Initially data were to be analyzed by content analysis and assigned numeric values according to themes and categories identified. Frequencies and correlations would then be used to describe the responses of participants and the relationships between the variables. However, due to the small sample size, the interviews were analyzed by thematic analysis and no numbers were assigned.

Thematic analysis is the process of identifying common ideas from direct quotations or from paraphrasing statements made by participants during the interview process. Once common ideas are obtained, patterns of experiences are listed. The next step in thematic analysis is to identify all data that relate to the already classified patterns by combining and cataloguing related patterns into sub-themes. Themes that emerge from the participant’s data are pieced together to form a comprehensive picture of their collective experience (Aronson, 1994).
Depression Awareness and Response

The first theme obtained from the data reflected an increased awareness for postpartum women about their depression and their response to that awareness. The effect of the follow up phone call when talking with a registered nurse caused postpartum women to feel calmer and reassured in their maternal role. The telephone call helped women to realize that their mood was depressed, which allowed the registered nurse to educate and support the participant over the telephone. The telephone support and education lead to a better understanding of PPD. However, the subjects reported that the phone call had no effect on their mood. In fact, none of the participants were taking psychiatric medications despite the elevated depression scores. The first participant was personally opposed to psychiatric medications, another participant used relaxation techniques to help lift her mood, and the last participant had an increased awareness for postpartum depression that helped her to realize when she was depressed, which led her to reach out to her support group for help. The call informing them of their elevated PPD score and encouraging them to contact their MD did not increase the frequency of contact with a doctor. None of the subjects reported seeking counseling, referrals, or beginning on medications.

Reassurance and Being Crazy

A second theme emerged from the data and reflected two dimensions of subject responses to the call, reassurance and being crazy. The second theme reflected positive feelings during the follow up call by the Psychiatric Nurse Practitioner to postpartum women who had elevated depression scores. The result of the follow up call was that postpartum women felt cared about, “more normal” and had an increased awareness of potential future problems with depression. While these subjects were called because of elevated EPDI or CESD scores, they reported that the calls helped them normalize some feelings. This perception was not held by all of the subjects. In sharp contrast, one participant “felt crazy”
as a result of the follow up call because psychiatric medications were advised and the participant was personally opposed to taking psychiatric medications.

**Education and Awareness**

Lastly, a third and final theme was uncovered in the project, education and awareness. All participants of this research study concurred that providers should increase education and awareness for women regarding postpartum depression and “not be afraid to ask them how they are feeling” in regards to being depressed (Figure 1).

**Figure 1**

**Theme 1: Phone Call Effect of Talking to RN For Surveys at 2, 4, 6, 8 months Postpartum**

- **Personal Mood**
  - No Change in Mood
- **Feelings About Maternal Roll**
  - Felt Calmer & Reassured
  - Felt Reassured in Maternal Role

**Theme 2: Feelings During Follow Up Call By ARNP on Elevated Depression Scales**

- **Feelings During Phone Call by ARNP**
  - Cared About
- **Feelings After Phone Call by ARNP**
  - Felt More Normal
  - Felt Less' Aware of Potential Problem
  - Felt Crazy with Suggestion for Medications
  - Personally Opposed to Psych Meds

**Theme 3: Feelings Expressed by Participants in Regard to PPD**

- **Wanted More Education for Postpartum Depression**
- **Wanted Education/Advice in Motherhood**
- **Needed Support for Women with Postpartum Depression**
In addition to increased education, the participants also wanted more education and advice on motherhood and felt strongly about the need for support to women with PPD. One participant felt her PPD would not have affected her as badly as it did, had she a women’s support group to attend. She felt that a support group with other mothers who were struggling with PPD would positively help her with PPD and motherhood challenges.

**Discussion**

The data did support the importance of follow up telephone calls as an intervention for postpartum women. The data indicated that three central themes emerged from the data. The postpartum women reported that they felt cared about, supported, and educated about postpartum depression. The participants felt calmer and were reassured about their maternal role. One participant stated that she felt like a bad mother for feeling the way she did, but as a result of the follow up telephone call, she felt reassured and relieved that her feelings were normal.

Roy’s adaptation model supported the importance of telephone calls as an intervention for postpartum women. The telephone calls were a form of environmental stimuli that triggered cognator and regulator coping mechanisms, which assisted the participants to adapt to their environment, resulting in an improved ability to cope with PPD.

As a result of telephone interventions, all participants felt an increased knowledge of postpartum depression, felt they understood their bodies better, and were aware of potential future changes of depression. Telephone calls as an intervention became an avenue for postpartum women to ask questions about and to become educated on postpartum depression.

No previous research has been completed regarding the effectiveness of follow up telephone calls as an intervention in postpartum depression. Research in primary care does support the effectiveness of follow up telephone calls as an intervention to major depression.
Limitations

There are several limitations to this project. Due to the small sample size, the findings cannot be generalized. The sample was not a random sample from the whole population. The sample was taken from a larger study on PPD, where the participants had elevated depression scores.

Another limitation to this study was the transcription error. All interviews were to be tape recorded and later transcribed. However, the tape recorder malfunctioned, and did not record the interviewed conversations correctly. Fortunately, the registered nurse who administered the follow up telephone interviews, manually hand wrote notes. This limitation potentially decreased the accuracy of the interview questions.

The content was not analyzed by content analysis as originally designed, due to the small sample size, therefore data was thematically analyzed, which changed the analysis outcome of the study.

Summary

Follow up telephone calls are an effective intervention in postpartum depression. The results of this study show that follow up telephone calls to women with postpartum depression helped them to feel cared about, more assured in their maternal role, and educated. No previous research has been completed regarding the effectiveness of follow up telephone calls as an intervention in postpartum depression. However, research in primary care on the interventions of follow up telephone calls for depression has proven to help substantially. As this study shows, more research needs to be done regarding follow telephone calls as an intervention in postpartum depression.

Nursing Implications

The use of follow up telephone calls in postpartum women is an important nursing intervention. Nurses in psychiatric settings, primary care offices, and obstetrics and
Gynecology clinics must be aware of the potential problem for PPD and implement follow-up telephone calls as an intervention for treatment. By using telephone calls as an intervention, postpartum women will feel calmer, cared about, and have an increased knowledge regarding PPD. Postpartum depression is a serious illness. PPD occurs at a time that is supposed to be filled with emotional well being. However, for women who suffer from PPD, this is not so. Nurses can help postpartum mothers to feel more confident, supported, and educated.
References


Appendix A
Interview Questionnaire: Verbal Script

Subject # __________

Verbal Script:

My name is Brenda Shanley and I am a nurse and graduate student at the College of Nursing. I am calling to do a follow-up with you from the Postpartum Depression Study that you participated in. I would like to ask you some questions that you can answer with your own words. I want to know about your feelings and experiences, so that we can help other mothers like you. It will take 20 minutes of your time. I will be recording our conversation.

1. **You received calls from members of the research team during this study.**
   First, I will ask about your regularly scheduled phone calls at 2, 4, 6, and 8 months.
   
   1A. How did the survey questions effect how you were feeling?
   
   1B. Can you tell me how the survey questions made you feel?
   
   1C. Can you tell me how you felt before the questions were asked and after the phone call was complete?
   
   1D. After the phone call ended, did you contact your doctor? If so, how did you decide it was something you needed to do?

2. **After you completed your survey(s), you received a follow-up call from a research team member, Dr. Rice. You may have received more than one call.**

   2A. Tell me how you felt during the call.
   
   2B. Can you tell me how you felt as a result of the phone call?
   
   2C. Tell me how this call affected your understanding of how you were feeling?
   
   2D. Can you tell me how the phone call made you feel toward receiving additional health care?

3. **When you started to feel badly, describe things that made you to feel better.**

   3A. If you were put on medication, What medication was prescribed?
3B. How long after you started taking the medication was it until you started to feel better?

3C. How well did the medication that was prescribed work, or did you have to go back to your doctor for a different dosage or a different medication? Can you tell me how you decided that this was something you needed to do?

3D. How did you know you were feeling better?

4. Based on your experiences, what would you want to say to health care providers caring for women after they give birth?

5. What would you want to say to new mothers/families about how they might feel after they give birth?

6. What advice would you give to new mothers about taking care of themselves after birth?

That completes my questions, is there anything else you’d like to share?

If not, thank you for your time.
Appendix B
Informed Consent

Childbearing Health Outcomes Follow-up

INFORMED CONSENT

A. Invitation to participate

You have been participating in a research study at the College of Nursing on postpartum depression. Dr. Kathie Records and Dr. Michael Rice, nurses and faculty members at the College have been coordinating the study. We are contacting you again because during the study you indicated that you were experiencing postpartum depression. We’d like to do a short follow-up with you about your experiences. The Intercollegiate College of Nursing/Washington State University College of Nursing and Washington State University Institutional Review Board (IRB) have approved this study.

B. Purpose of the study

This study is looking at how our phone calls or mailings to you might have helped you to identify how you were feeling. One of the things we are curious about is what helped you to feel better during your postpartum period.

You are asked to take part in this study because you participated in our first study and had interventions for postpartum depression. Whether you agree to participate or not, your care with your health care provider or the hospital will not be affected in any way.

C. Explanation of protocol

If you agree to take part in this study, you will need to sign this consent form and mail it back to us. This form tells you what you will be asked to do if you are in the study, and a copy is available for you to keep.

1. You will be asked to have a brief 20-minute interview with the trained data collector who is a registered nurse. You are free to not answer any question you would prefer not to answer.

2. The interview will be scheduled at a time that is convenient for you. The data collector will ask you questions over the phone about how you felt during the previous study.

3. The interview will be audio-taped. You will not be identified by name on the audio-tape and it will be labeled with your subject number. I will type the conversation within 1 week after our interview. The tape will be kept in a locked file cabinet in my faculty advisor’s office and will be only labeled with your subject number. It will be destroyed within one year of completion of the study.
4. After the interview, there will be no further data collections needed.

D. Potential risks and discomforts

You may become uncomfortable if the interview reminds you of emotional issues. These risks and discomforts are decreased because the data collector is a registered nurse and will be trained to stop and offer you the opportunity to withdraw from the study if these issues emerge. They will also be able to contact a licensed psychiatric nurse practitioner for referral, if you'd like someone else to talk to.

We have made every effort to provide complete confidentiality and privacy so no one will know you have taken part in this study. All of your personal information is protected by giving you a study number. Your name and study number are kept in separate files, and are available only to us and the research team as needed. All research information and personal identifying information will be kept in locked files that can be opened only by us and our research team. When results are reported, they will be reported as group data. You, personally, will not have individual private data revealed.

If you do have any strong emotional reactions to any of the questions you are asked, you will be given the name and phone number of specialist who is familiar with counseling people in this area. You may also be referred back to your obstetrician if you feel that you need a referral for ongoing care.

You may choose not to continue at any time during the study. If you choose to withdraw, it will not affect your relationship as a patient with your health care provider or the hospital. You may choose to answer as many or as few of the questions as you choose. The decision to participate is completely voluntary.

E. Potential benefits

You may feel good that you have helped us to learn more about childbearing experiences. It is hoped that by you and other women participating, we can learn how to better help women through the childbearing process.

F. Assurance of confidentiality

Information obtained as part of this study will be strictly private and confidential. The information will be used only for research. The number code with your name will be available only to us and our research team. The completed information will be kept in a locked file and your personal
identifiers (e.g., Name) will be destroyed at the end of this study. All coded information will be kept for three years after completion of the study. At no time, will your study number and personal information be available to anyone but the research team. Study results will be reported only as group data, without your name attached.

Finally, you should understand that the investigators continue to have ethical and legal obligations to report as follows: "ACCORDING TO WASHINGTON STATE LAW, IF AT ANY TIME, YOU INDICATE THAT YOU MAY BE A RISK OR DANGER TO YOURSELF OR OTHERS, THIS INFORMATION WILL NOT BE KEPT CONFIDENTIAL AND WILL BE REPORTED TO THE APPROPRIATE AUTHORITIES OR HEALTH PROFESSIONALS".

G. Withdrawal from the study

Your agreement to take part in this study is voluntary. If you agree to take part, you may choose to stop and withdraw your consent at any time.

H. Informed consent

1. I, as shown by my signature below, fully understand the study goals, procedures and risks that go along with taking part in with this study.
2. I, as shown by my signature below, understand that taking part in this study is of my own free will and that I may stop at any time.
3. I, as shown by my signature below, give permission to Kathie Records Ph.D., R.N. and Michael Rice, PhD, ARNP to use and destroy information and findings from this study.
4. I understand that the investigator and other professionals who work with the investigator agree to protect the privacy and confidentiality of the information gathered during this study within the limits of Washington State Law.

I have read and understand the above conditions. I have had the chance to ask questions about the study and the methods used to collect the study information. These questions have been answered to my satisfaction. I have read and understand the study and have received a copy of this form.

I may contact either Dr. Records or Rice (numbers listed below) to get information or ask questions I may have about this study at any time. I can also call the Washington State University Institutional Review Board with questions about my rights as a participant in a research project at (509) 335-9661.
Subject's Signature ___________________________ Date ____________

Printed Name ___________________________ Date ____________

Investigator's Signature ___________________________ Date ____________
Kathie Records, PhD, RN
(509)324-7255

Investigator's Signature ___________________________ Date ____________
Michael Rice, PhD, ARNP
(509)324-7256

Data Collector Signature ___________________________ Date ____________

Contact Information (self):

Please update your phone number:

What is the best time to reach you?
Appendix C
Institutional Review Board

TO: Institutional Review Board
FROM: Kathie Records
DATE: October 8, 2003
RE: IRB #1906-g

I would like to extend the protocol titled “Childbearing health of abused and non-abused women”. The original protocol will remain the same with the following modifications.

1. During the original study, which is finished with subject recruitment and continuing in data collection, women were identified with postpartum depression. As per the original human subject approval, these women received follow-up with Dr. Michael Rice and their obstetricians or were referred to therapists in their local area.

However, once they complete the study we have no data regarding their perceptions of the data collection, follow-up or referral for their depression. This is the component that needs to be addressed.

2. I would like to mail out the attached consent form to all women who were identified during the original study as having postpartum depression. If they desire to participate one additional time, they will sign the consent form and returning it to me.

3. Upon receipt of the signed consent, a telephone interview will be arranged with the subject. The interview will be tape-recorded and will use structured interview questions. The questions are attached.

This information is necessary to more fully identify postpartum interventions with depressed women.

Thank you.
January 7, 2004

Kathie Records, PhD, RN
Intercollegiate College of Nursing
WSU College of Nursing
2917 Ft. Wright Dr., West
Spokane, WA 99224-5291

RE: IRB 898 – "Childbearing Health of Abused and Non-Abused Women"
Approval Expiration Date: 1/31/04

Dear Dr. Records:

For the referenced study, the following have been reviewed and granted expedited approval by the IRB-Spokane on January 7, 2004.

<table>
<thead>
<tr>
<th>Name of Document</th>
<th>Version Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amendment extending original study for 10 previously enrolled subjects to include a followup telephone interview</td>
<td>12/29/03</td>
</tr>
<tr>
<td>Consent Form</td>
<td>12/25/03</td>
</tr>
</tbody>
</table>

The following conditions apply to this project:

- All new patients entered on this study must sign the most recent IRB stamped approved consent form. You are responsible for maintaining all consent forms in medical charts as appropriate and in your personal records. Consent forms must be kept on file for a period of three years.

- The study will be subject to continuing review. If your study continues to be active beyond the approval period, submit a request for continuation in the progress report. Please note: Continuation of research after expiration of IRB approval is a violation of the FDA regulations [21 CFR 56.103 (a)]. Studies will be suspended if the progress report is not received by the expiration date. A final report will be required on completion of the study or on the next review date.

- Emergent problems, unexpected side effects, serious adverse reactions and deaths, whether or not study related, are to be reported within five days (appropriate SAE report form can be found on our web site).

- Procedural changes or amendments must be reported to the IRB (appropriate amendment form can be found on our web site), and no changes may be made without IRB approval except to eliminate apparent immediate hazards.

Periodic site visits may be made by the IRB. You will be requested to provide pertinent information if your project should be reviewed.

Sincerely,

Robert A. Stier, M.D.
Co-chair
MEMORANDUM

TO: Kathie Records & Michael Rice
Intercollegiate College of Nursing

FROM: Jamie Murphy (for) Cindy Corbett, Chair, WSU Institutional Review Board

DATE: 24 November 2003

SUBJECT: Review of Protocol Modification - Modification

Your proposal to modify the protocol titled "Childbearing Health of Abused and Non-Abused Women," IRB File Number 1906-o was reviewed for the protection of the subjects participating in the study. Based on the information received from you, the IRB has approved your modification request on 24 November 2003. This modification includes a new survey instrument.

IRB approval indicates that the modifications described to the previously approved study protocol are designed to adequately protect the subjects participating in the study. This approval does not relieve the investigator from the responsibility of providing continuing attention to ethical considerations involved in the utilization of subjects participating in the study.

The approval for this protocol expires 30 November 2004. If any more changes are made to the study protocol you must notify the IRB and receive approval before implementation.

If you have questions, please contact the Institutional Review Board at OGRD (509) 335-9661. Any revised materials can be mailed to OGRD (Campus Zip 3140), faxed to (509) 335-1676, or in some cases by electronic mail, to ogrd@mail.wsu.edu.

Review Type: MOD
Review Category: FB
Foundation
Date Received: 9 October 2003

OGRD No.: 10419, 11590
Agency: NIH, Group Health Kaiser Permanente Co.
### Appendix D

#### Content Analysis

**SUBJECT 1**

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<th>Outcome</th>
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</thead>
<tbody>
<tr>
<td>#1a Patient to Question</td>
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<td>No change</td>
</tr>
<tr>
<td>#1b Phone call</td>
<td>Patient</td>
<td>No change</td>
</tr>
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<td>#1c Pre question</td>
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<td>No answer</td>
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<tr>
<td>Post question</td>
<td>Patient</td>
<td>Felt better</td>
</tr>
<tr>
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<td>No change</td>
</tr>
<tr>
<td>#2a Patient to Question</td>
<td>Patient</td>
<td>Felt cared about</td>
</tr>
<tr>
<td>#2b Patient to Question</td>
<td>Patient</td>
<td>Relieved to feel normal</td>
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<td>Felt Educated</td>
</tr>
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<td>#3 Patient to question</td>
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<td>Interventions for feeling better</td>
</tr>
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</tr>
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<td>#3b Patient to Medications</td>
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<td>No medications prescribed</td>
</tr>
<tr>
<td>#3c Patient to Medications</td>
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<td>No medications prescribed</td>
</tr>
<tr>
<td>#3d Patient to Medications</td>
<td>Patient</td>
<td>No medications prescribed</td>
</tr>
<tr>
<td>#4 Patient to educate MD</td>
<td>Patient</td>
<td>Suggestions for improved PPD health</td>
</tr>
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<td>#5 Patient to New Mothers</td>
<td>Patient</td>
<td>Education on Motherhood</td>
</tr>
<tr>
<td>#6 Patient to New Mothers</td>
<td>Patient</td>
<td>Advice on Motherhood</td>
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**SUBJECT #2**

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<td>Bad mothering</td>
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<td>Post question</td>
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<td>Felt better</td>
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<td>No change</td>
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<tr>
<td>#2a Patient to Question</td>
<td>Patient</td>
<td>Felt cared about</td>
</tr>
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<td>#2b Patient to Question</td>
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</tr>
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### Content Analysis

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| #3d | Patient to Medications | Patient | No medications prescribed |
| #4  | Patient to educate MD way; educate and prepare | Patient | Explain normal to feel that |
| #5  | Patient to New Mothers | Patient | Education on Motherhood |
| #6  | Patient to New Mothers | Patient | Advice on Motherhood |

### SUBJECT #3

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