

**Self Esteem Changes in Primigravida Women Before and After Delivery**

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## **Abstract**

Hormonal and related biological changes associated with giving birth may initiate or precipitate a change in self-esteem. The change in lifestyle associated with caring for a young infant, for example changes in normal daily activities, lack of sleep caring for the infant, change in financial security, change in the relationship with her partner, may constitute a set of stresses that have mental health consequences for the mother. Since primigravida women have no previous personal experience with childbirth they might have less of a coping strategy to deal with their emotional changes during childbirth. The intended outcome from this project can help care providers to better strategize a plan to take care of the psychological needs of the pregnant patient before and after delivery. 50 participants from Maricopa Integrated Hospital System (MIHS) in Phoenix, AZ. Participants were third trimester primigravida women between ages 18-30. Before delivery the participants filled out SSQ6, Rosenberg Self report measures for love and compassion research: Self-Esteem and demographic information. After delivery, they filled out Rosenberg Self Report measures for love and compassion research: self-esteem. The results did not turn out to be statistically significant due to the less than desired study participants following up after delivery. SSQ6 results show that most of these women had good social support during their very first pregnancy. Rosenberg survey results were not statistically significant but they showed a pattern that shows self esteem increasing in our participants post delivery. It would seem like self-esteem has increased after delivery in our population. In conclusion, more studies need to be done to obtain a statistically significant result that will help the providers craft a better plan to care for the emotional needs of pregnant patients.

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## Introduction

Humans like to feel good about themselves and that has been evident throughout history. When people succeed, they not only know they performed well and evaluate themselves positively, but they feel good about themselves. Individuals as well as groups of people have always strived to make themselves look better and that concept that assesses a person's value is known as self-esteem. At its core, self-esteem refers to how we feel about ourselves (Scheff, Retzinger, & Ryan, 1989). It is nearly impossible to imagine an otherwise healthy and well-adjusted person who is truly indifferent to self-esteem. A person with normal or high self esteem will feel confident about themselves but what about a person with low self-esteem? What are the consequences of having a low self-esteem? Research done by Donnellan, Trzesniewski, Robins, Moffitt, and Caspi (2005) found a relation between low self-esteem and externalizing problems. The study found that people with low self-esteem are more prone to aggression, anti-social behavior, and delinquency. This gives us a very compelling reason to prevent pregnant women from having low-esteem during puerperium. Self esteem is relatively stable trait but it still goes through developmental stages throughout the lifespan (Robins & Trzesniewski, 2005). Same paper also said "a mothers' body image may be affected by the physical changes during pregnancy. These body image issues may in turn impact mothers' self-esteem." Any intervention should not be just to prevent the previously mentioned consequences but also to help make them feel better about themselves and have a good relationship with their baby and their partner. Studies have shown a positive relation between maternal self-esteem and acceptance of the baby (Taylor, Roberts, & Jacobson, 1997). According to Bandura (1982), "low self- efficacy leads to suboptimal performance of existing skills and a lack of persistence in problem-solving efforts. Thus, women with little confidence in their parenting ability probably behaved in ways that led to a low rate of reinforcement from their infants". As shown in their research, low self-esteem can negatively affect a mother-child relationship therefore, if maternal self-esteem can be preserved postpartum compared to antepartum then it will be beneficial to the mother as well as the baby. Research done by Reisz, Jacobvitz & George (2015) looked at how modes of delivery and subjective birth experience have direct effects on mothers' descriptions of their babies and maternal self-esteem. Their

research found that “mode of delivery did not have a direct effect on maternal self-esteem”. That finding helped us eliminate one of the variables that could affect maternal self-esteem. Several researches have also shown an increase in postpartum depression (Tsao, Creedy, and Gamble 2014; Beck 2001; O’Hara 1996), which means that there are psychological changes happening in pregnant women and that it needs to be addressed. This observation of psychological changes in women post childbirth is not a modern remark. The belief that there exists a particular set of ‘mental illness symptoms’ brought on by childbirth can be traced to the writings of Hippocrates, Celsus, Galen and, more recently, Esquirol (Zilboorg 1929)

Hormonal and related biological changes associated with giving birth may initiate or precipitate a change in self-esteem. Alternatively, or additionally, the change in lifestyle associated with caring for a young infant, for example changes in normal daily activities, lack of sleep caring for the infant, change in financial security, change in the relationship with her partner, may constitute a set of stresses that have mental health consequences for the mother.

Of course, an alternative analysis might point to the emotional benefits associated with giving birth and/or rearing a young infant. There might also be emotional benefits to the mother from sharing with her partner the activities associated with child care and rearing. According to this view, the birth of a child might lead to improved mental health for the mother.

Our research participants are experiencing pregnancy for the first time in their lives and if we can do something to make this experience a little less psychologically demanding then it will be a worthwhile effort. A positive effect of this study might be better psychological and physical care for women during their labor and post labor period.

The reason we chose self-esteem in primigravida women is because there was little to no previous research done in this population. Since primigravida women have no previous personal experience with childbirth they might have less of a coping strategy to deal with their emotional changes during childbirth. Women who are in their second pregnancies have a higher chance of adapting to the emotional changes during pregnancy due to their experience from previous pregnancies, although, it would be interesting if someone would do research to

see if that can be validated.

The result from this project can help care providers to better strategize a plan to take care of the psychological needs of the woman so that her self-esteem can be brought back up to the pre-labor level as soon as possible. Individualized emotional support has been shown to empower women and increase the possibility of a positive birth experience. How women assess their experience and the factors that contribute to a positive birth experience are of importance for midwives and other caregivers. (Karlstrom 2015). These women have went through a lot of pain and it would help them immensely if something can be done to help them feel better about themselves.

## Methods

This study was conducted at Maricopa Integrated Hospital System (MIHS) in Phoenix, AZ, USA. Third trimester primigravida women between ages 18-30 were invited to participate. Those who were willing to participate were enrolled in the study after obtaining informed consent. On first contact, we asked them to complete the demographic information (figure 1), Social Support Questionnaire 6 (SSQ6) (figure 2), and the Pre-delivery Rosenberg Self Report Measures for Love and Compassion Research: Self-Esteem (figure 3). Within 6 weeks after delivery we contacted them to complete the Post Delivery Rosenberg Self Report Measures for Love and Compassion Research: Self-Esteem (figure 3) and we performed a chart review (figure 4). MIHS is a county hospital and the population that it serves is majority Spanish speaking and economically underserved so we translated all our material to Spanish as well. We figured it would be difficult to get enough post delivery surveys completed due to follow up non-compliance among the hospital population and our suspicions were correct, as we were unable to get post delivery surveys completed from 26 out of the 50 initially enrolled participants. We tried contacting these participants several times to get the post delivery surveys completed but were unsuccessful because their phone numbers were not up to date and/or our calls went unanswered.

Statistical Analysis were performed using Linear Regression to ascertain the mean difference in the change of self-esteem scores adjusting for baseline self-esteem scores, Spearman's Rho was use to ascertain the correlation between social support satisfaction scores and the change in self-esteem scores from pre to post intervention. And P-value was calculated using the Wilcoxon Signed Rank Test.

## Results

Total number of women who participated in this study was 50 but only 24 out of the 50 completed the post delivery survey therefore, we only included the data from these 24 participants. The average age of the participants was 21.5. Most of the women were Hispanic (70.8%), but primary language was English for 54% of participants. Exactly half of them were married and 58% of the pregnancies were intended. Only 41.7% had high school graduation or greater and exactly that amount of women had household income >\$20,000. A little more than half (54%) of women had OB Triage visits. Majority of deliveries were NSVD (70%) and only (30%) of infants had a NICU admission. Table 1 shows the distribution of demographic data.

### *Social Support*

Table 2 gives the breakdown of Social Support Questionnaire 6 data. As demonstrated by the data, all the questions had high mean scores, which means that most of these women had good social support during their very first pregnancy. Among those who were in a relationship, majority reported their partner/significant other as number 1 in the SSQ6 questions. Majority also had more than 1 person to help them and accept them. Except for 1 participant, all others had more than 1 person in their life who could console them when they are upset.

Demographics			
Demographic and Clinical Characteristics	Value (n=24)	Coeff (95% CI)	P-value <sup>1</sup>
Age (mean, SD)	21.5 (3.5)	0.008 (-0.18, 0.19)	0.93
Ethnicity (Hispanic, %)	17 (70.8)	0.73 (-0.56, 2.03)	0.25
Primary Language (English, %)	13 (54.2)	0.39 (-0.72, 1.51)	0.46
Marital Status (Married, %)	12 (50.0)	0.55 (-0.57, 1.67)	0.31
Household Income (>20,000 per year)	10 (41.7)	0.44 (-0.68, 1.56)	0.42
Education (> High School Graduation)	10 (41.7)	0.49 (-0.67, 1.64)	0.39
Pregnancy Intention (Changing or Unintended, %)	14 (58.3)	-0.79 (-1.88, 0.28)	0.14
Pregnancy Weight Gain, LBS (mean, SD)	33.5 (11.5)	-0.02 (-0.06, 0.03)	0.53
BMI closest to Delivery, kg/m <sup>2</sup> (mean, SD)	31.2 (5.3)	0.005 (-0.10, 0.11)	0.92
History of STI (yes, %)	4 (16.7)	-0.70 (-2.24, 0.84)	0.35
Substance Abuse (yes, %)	0 (0.0)	N/A	
OB Triage Visit (yes, %)	13 (54.2)	0.75 (-0.33, 1.83)	0.16
History of Domestic Violence (yes, %)	1 (4.2)	-0.76 (-3.55, 2.02)	0.57
Number of Medical History Risk Factors (n, %)			
0-1	16 (66.7)	REF	0.39
2	4 (16.7)	-0.76 (-2.33, 0.80)	
3	4 (16.7)	-0.47 (-2.01, 1.06)	
Fetal Medical History (n, %)			
None	10 (41.7)	REF	0.88
Neural Tube Defects/Other	14 (58.3)	0.08 (-1.06, 1.21)	
Type of Delivery (n, %)			
Standard Vaginal Delivery	17 (70.8)	REF	0.10
Schedule or Emergent Cesarean Section	7 (29.2)	0.95 (-0.19, 2.11)	
NICU Admission (yes, %)	7 (29.2)	0.63 (-0.61, 1.88)	0.30

<sup>1</sup>Linear Regression to ascertain the mean difference in the change of self-esteem scores adjusting for baseline self-esteem scores.

Table 1. Sociodemographic Data and Clinical Characteristics.

Self Esteem Scores.

Self Esteem Questionnaire	Pre-Delivery Mean (SD)	Post-Delivery Mean (SD)	Difference in Self-Esteem Scores Mean (SD)	P-value <sup>1</sup>
On the Whole, I am Satisfied with myself.	1.58 (0.71)	1.50 (0.72)	-0.08 (0.88)	0.28
At times I think I am no good at all.	3.0 (0.88)	3.41 (0.65)	0.41 (1.1)	0.06
I feel that I have a number of good qualities.	1.62 (0.49)	1.62 (0.49)	0.0 (0.58)	1.0
I am able to do things as well as most other people.	1.75 (0.74)	1.58 (0.65)	-0.16 (0.81)	0.36
I feel I do not have much to be proud of.	3.33 (0.63)	3.41 (0.58)	0.08 (0.65)	0.52
I certainly felt useless at times.	3.25 (0.61)	3.41 (0.65)	0.16 (0.91)	0.19
I feel that I'm a person of worth, at least on an equal plane with others.	1.83 (0.70)	1.62 (0.71)	-0.21 (0.83)	0.14
I wish I could have more respect for myself.	2.87 (0.94)	3.16 (0.76)	0.29 (0.99)	0.15
All in all, I am inclined to feel that I am a failure.	3.54 (0.58)	3.50 (0.66)	-0.04 (0.69)	0.94
I take a positive attitude toward myself.	1.62 (0.64)	1.50 (0.51)	-0.12 (0.67)	0.36
<b>Overall Composite Score</b>	<b>21.1 (2.48)</b>	<b>24.7 (1.25)</b>	<b>3.67 (2.74)</b>	<b>&lt;0.001</b>

<sup>1</sup>P-value calculated using the Wilcoxon Signed Rank Test.

Table 3. Rosenberg Self Esteem Survey



## Social Support

Questions	Value	Social Support Satisfaction Mean, (SD)	Spearman's Correlation* Rho (p-value)
	N, %		
<b>Whom can you really count on to be dependable when you need help?</b>		5.83 (0.38)	0.22 (0.30)
None			
1	0 (0.0)		
2	4 (16.7)		
3	2 (8.3)		
4	5 (20.8)		
5	3 (12.5)		
6	3 (12.5)		
other	3 (12.5)		
	4 (16.7)		
<b>Whom can you really count on to help you feel more relaxed when you are under pressure or tense?</b>		5.79 (0.41)	0.27 (0.18)
0			
1	0 (0.0)		
2	7 (29.2)		
3	6 (25.0)		
4	6 (25.0)		
5	3 (12.5)		
6	2 (8.3)		
	0 (0.0)		
<b>Who accept you totally, including both your worst and your best points?</b>		5.75 (0.53)	0.14 (0.52)
0			
1	0 (0.0)		
2	6 (25.0)		
3	4 (16.7)		
4	5 (20.8)		
5	6 (25.0)		
6	2 (8.3)		
	1 (4.2)		
<b>Whom can you really count on to care about you, regardless of what is happening to you?</b>		5.79 (0.51)	0.39 (0.05)
0			
1	0 (0.0)		
2	5 (20.8)		
3	5 (20.8)		
4	5 (20.8)		
5	3 (12.5)		
6	3 (12.5)		
	3 (12.5)		
<b>Whom can you really count on to help you feel better when you are feeling generally down-in-the dumps?</b>		5.62 (0.57)	0.14 (0.38)
0			
1	0 (0.0)		
2	4 (16.7)		
3	6 (25.0)		
4	7 (29.2)		
5	5 (20.8)		
6	0 (0.0)		
	2 (8.3)		
<b>Who can you count on to console you when you are upset?</b>		5.79 (0.41)	0.43 (0.03)
0			
1	1 (4.2)		
2	7 (29.2)		
3	6 (25.0)		
4	5 (20.8)		
5	3 (12.5)		
6	0 (0.0)		
	2 (8.3)		

\*Spearman's Rho to ascertain the correlation between social support satisfaction scores and the change in self-esteem scores from pre to post intervention.

Table 2. Social Support Questionnaire 6

### *Self Esteem Scores*

Due to the limited number of participants who completed the full study, our results could not demonstrate a statistical significance. Table 3 demonstrates the mean scores for different questions on the Rosenberg self esteem survey and also gives an overall composite score and the P values for individual questions. On the first question about overall satisfaction with themselves, the participants reported diminished self-satisfaction post delivery. Another question asked about taking a positive attitude towards themselves and participants reported reduced positive attitude post delivery. Most of the results from Rosenberg survey followed the pattern of decreased self-esteem. The only question that bucked the trend was, "I am inclined to feel that I am a failure" which showed more participants felt they were a failure pre-delivery than post-delivery.

## Discussion

Notably, our study had a low follow up rate than what we had hoped. Due to delay in IRB process and time available we were only able to enroll 50 participants instead of the 200 we had originally planned. Even then, we knew that getting the post delivery survey would be a herculean task but only getting 24 out of 50 was a little disappointing. We hope someone in the future would repeat this study with a larger population and get a statistically significant result, which can bring about a clinical change as well. Secondary to not achieving the power desired, our results were helpful in making some conclusions. In the Rosenberg self esteem survey results, there was one question with a statistically significant result ( $p$ -value 0.06) and that question was "At times I think I am no good at all". This question was one of the questions in the survey that directly asked about self-worth and this question perfectly sums up what is at the heart of this study. The pre delivery mean was 3.0 and the post delivery mean was 3.41. The survey utilized a likert scale and had 1. Strongly agree, 2. Agree, 3. Disagree and 4. Strongly Disagree. So, the results from just this question would indicate that the participants did not feel better about themselves post delivery. Now, we cannot infer that this question alone would determine that change in self-esteem in our study was negative but this is a pattern that we saw with the results from other questions as well. The other question that had a wider difference in mean scores was "I wish I could have more respect for myself" with a pre delivery mean of 2.87 and post delivery mean of 3.16 ( $P$  value 0.15). This result from this question, even though statistically insignificant, shows a pattern similar to the previously mentioned result. It would seem like self-esteem has decreased after delivery in our population.

Future research should focus on self-esteem changes during pregnancy and post delivery. If studies can look during the whole pregnancy period and also 3 years post delivery, it can give us a better idea of changes in self-esteem. Based on the little pattern we saw in our study we think the pattern would be likely to hold up in a bigger study with self-esteem decreasing after delivery. But what would be interesting to see is whether self-esteem increased or decreased during pregnancy the comparison between pre-pregnancy self-esteem vs pregnancy self-esteem vs post delivery self esteem. It would also be interesting to see if there is any relationship between self-esteem and relationship satisfaction. Psychologists'

theories about self-esteem emphasize the importance of a sense of social belonging; when a new mother is out of step with her partner, they argue, the discord shows in her own levels of self-belief (Lee 1998). Future studies can also look at differences in self esteem between different racial groups because motherhood and the support that comes with it can be different in different cultures.

Identifying pregnant women who are at risk of depression is important and at times lifesaving. Understanding when low self-esteem exist as a spectrum in postpartum depression can give us healthcare professionals a chance to intervene and provide the necessary resources. Most of the research until now has focused on how the baby turns out instead of focusing on women's identity transition. Therefore, there is great potential to conduct research in this field and provide interventions for our patients. We encourage future research to test our study variables, self-esteem and relationship satisfaction, among a more diverse sample of mothers and even fathers from different social, economic, and cultural backgrounds.

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