"CARING FOR THE MOM AS CAREGIVER THROUGH EVIDENCE-BASED PRACTICE PRINCIPLES"

Rebecca Helmreich, PhD, RN, WHNP-BC
Response to stress of pregnancy

• When remain resilient and have positive perinatal outcomes in spite of an over-abundance of life circumstances → → →
  - INTACT vagal response $^{1,2}$
Vagal response
Negative response

• individuals with attenuated response

• → → attenuated response to life obstacles → → exhibit a lack of physiologic adaptability → → lack the self-regulatory capacity to adjust rapidly to stressful stimuli \(^{1,3}\)
**Fight or Flight Response**

- **Saliva**: flow decreases
- **Skin**: blood vessels constrict; chills and sweating
- **Heart**: beats faster and harder
- **Stomach**: output of digestive enzymes decreases
- **Muscles**: become more tense; trembling can occur
- **Lungs**: quick, deep breathing
- **Blood vessels**: blood pressure increases as major vessels dilate
- **Bladder**: food movement slows down
Pregnancy may be stressful.

Physiological risks and costs.
Physiologic risk and cost of obesity and weight gain during pregnancy

- increased health care costs
  - prenatal fetal tests, ultrasounds, medications, telephone calls to the provider, prenatal visits with maternal-fetal specialists and longer length of hospital stay caesarean birth and obesity-related high-risk conditions.\textsuperscript{5,6}
Psychosocial stress
Stress, Anxiety and Depression
Stress

- A physical, mental or emotional response to events that causes bodily or mental tension
- A bodily reaction that arises from an unpleasant feeling or a situation that is not comfortable with
The Negative Stress Cycle

- Negative Physical Symptoms
- Automatic Thoughts
- Maladaptive Behavior
- Negative Moods & Emotions

Stress

The cycle continues...
The Cycle of Depression

Increased anhedonia leads to decreased external rewards

Decreased external rewards lead to decreased engagement

Decreased engagement leads to decreased social interaction

Decreased social interaction leads to decreased external rewards

Decreased external rewards lead to increased anhedonia
Stress, Anxiety and Depression on blood pressure and vagal response in women with various BMI’s.
Study: The impact of psychosocial distress on Physiologic Indicators

• IRB approval

• ?: what is the impact of the psychosocial factors on vagal response and blood pressure in 20 obese and 20 non-obese pregnant women at one point in time between 20 and 30 weeks gestation
Blood Pressure

• was measured using a digital oscillometric monitor with an appropriately-sized upper arm cuff (Omron 711c, HRM, USA Inc.) in accordance with the American Heart Association’s general guidelines.⁷
Vagal Response: an index of parasympathetic nervous system

- measured by a times series analyses of HP (reverse of heart rate) and RSA (respiratory effect on heart rate & PNS) using a EZ-IBI inter-beat interval interval monitor (UFI, Morro Bay, CA) and the Cardio Edit/Batch software. Cardio Edit allows for visual inspection and editing of ECG data for artifacts, and Cardio Batch performs data analysis.  

8
Scale assessment

Complete the PSS-10 and the CESD
Perceived Stress Scale (PSS) - 10

- questionnaire eliciting the frequency of feeling overwhelmed or able to cope in the past month, where participants rated each item as never (0) to almost always (4). Internal consistency assessed by Cronbach’s α was 0.85 in previous Samples. Scores higher than 23 equate with symptoms of stress.
Depression Scale: CESD

- 20 item scale covers affective, behavioral, and somatic symptoms experienced during the past week. Items are scored on a 4 point scale, from 0 (rarely or none of the time) to 3 (most or all of the time). Cronbach’s alpha ranged from 0.87 – 0.90\textsuperscript{11-13} or 0.738 in the current study. Scores \(>16\) = symptoms of depression\textsuperscript{14}
Pregnancy Anxiety Scale

- The 10 item scale with four response options elicits responses r/t the baby’s health (I have a lot of fear regarding the health of my baby), labor and delivery (I am afraid I will be harmed during delivery), and caring for the baby once born (I am concerned (or worried) about taking care of a new baby’). Cronbach’s alpha for the scale was 0.78 to 0.79\textsuperscript{15} or .82 in the present study.
STUDY FINDINGS

Demographics & findings
<table>
<thead>
<tr>
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<th>Obese n = 20</th>
<th>Non Obese n = 20</th>
<th>Sig</th>
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<td>Height (Inches)</td>
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<td>Obese n = 20 (%)</td>
<td>Non Obese n = 20 (%)</td>
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<td>Lives with FOB</td>
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<td>9 45</td>
<td>NS</td>
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<td>&lt; HS</td>
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<td>1 5</td>
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<td>Full time homemaker</td>
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## Mean differences between all means

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<tr>
<th>Variable</th>
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<th>P</th>
<th>95% Confidence</th>
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<tr>
<td>Total CES-D</td>
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<td>Total PRA</td>
<td>1, 38</td>
<td>-2.195</td>
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<td>-7.02 - .28</td>
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<td>Total PSS</td>
<td>1, 38</td>
<td>.489</td>
<td>.628</td>
<td>-1.88 - 3.09</td>
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<td>Total PPP</td>
<td>1, 38</td>
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<td>.835</td>
<td>-2.66 - 2.16</td>
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<tr>
<td>Total CES-D</td>
<td>1, 22.72</td>
<td>-2.770</td>
<td>.011*</td>
<td>-10.21 - 1.59</td>
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<td>1, 38</td>
<td>-.210</td>
<td>.835</td>
<td>-2.66 - 2.16</td>
</tr>
</tbody>
</table>

CES-D = depression scale; PRA = prenatal anxiety; PSS = stress scale
<table>
<thead>
<tr>
<th>Variable (item #)</th>
<th>Obese M</th>
<th>Obese SD</th>
<th>Non Obese M</th>
<th>Non Obese SD</th>
<th>M D</th>
<th>T</th>
<th>P</th>
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<td>.716</td>
<td>-.65</td>
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<td>Bothered (1)</td>
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<td>.75</td>
<td>1.070</td>
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<td>Feel depressed (6)</td>
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<td>.308</td>
<td>.75</td>
<td>1.070</td>
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<td>Lonely (14)</td>
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<td>.224</td>
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<td>.045*</td>
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<td>Sad (18)</td>
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<td>.30</td>
<td>.85</td>
<td>.745</td>
<td>-.75</td>
<td>-4.1</td>
<td>.000*</td>
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### Mean differences between all means on individual items with significant items

<table>
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<th>Variable (item #)</th>
<th>Obese</th>
<th>Non Obese</th>
<th>M</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
<th>M - D</th>
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<tr>
<td><strong>PRA</strong></td>
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<td></td>
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<td>Harm to baby during birth (5)</td>
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<td>-.70</td>
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<td>.032</td>
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<tr>
<td>Concern growth &amp; develop (6)</td>
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<td>.912</td>
<td>2.60</td>
<td>1.142</td>
<td>-.70</td>
<td>-2.142</td>
<td>.039</td>
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</tr>
<tr>
<td><strong>PSS</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack Confidence (2)</td>
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<td>.503</td>
<td>1.25</td>
<td>.910</td>
<td>-.85</td>
<td>-3.655</td>
<td>.001</td>
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## Conclusions

<table>
<thead>
<tr>
<th>Obese</th>
<th>Non-Obese</th>
</tr>
</thead>
<tbody>
<tr>
<td>➢ Height and weight = BMI</td>
<td>➢ Depression and Anxiety</td>
</tr>
<tr>
<td>➢ Systolic &amp; diastolic BP</td>
<td></td>
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</table>

- **No Difference between groups**

- Heart Period (reverse of heart rate)
- RSA (PNS = vagal nerve to < heart rate)
Improving the experience of the mom

• Meet and greet – involve mom in assessing needs and how could best help meet her expectations

• 1. what does mom see as her biggest concerns?

• 2. what methods work best (personal learning style or new information organization)
Things to remember

- There is no single correct way to involve moms and one method does not fit all.
Step 1

1. Set very clear aims and objectives → helps to make an informed decision about whether or not and to what extent they may wish to participate;

2. Explore with patients what information will help to inform and prepare them for motherhood beforehand and after
Step 2

• Identify needs of mom and nurse at onset of sessions and discuss means to meet needs-

• To identify present needs Assess feelings over the previous 24 hours
Step 3

• Using the feelings words list, write down as many feelings you can recall over the past 24 hours to identify needs
• - formulate a plan to prioritize needs and how to address
Explore dietary habits

1. Review dietary habits at present
2. Make suggestions and healthy substitutions that will work for the family
3. Suggest cooking low in fat
4. Drink 8 (8oz) cups of H2O q-day
Benefits of exercise during pregnancy:

- Improve blood flow
- Relieve back pain
- Strengthen pelvic floor
- Relax and unwind
Exercise during pregnancy & postpartum

- https://www.webmd.com/baby/ss/slideshow-pregnancy-fitness-moves
- Baby Bump Fave: **Swimming**. As a mom-to-be, you're focused on doing everything you can’t
- Baby Bump Fave: **Yoga**. Yoga strengthens core muscles, eases back pain, and helps you relax.
- Baby Bump Fave: **Indoor Cycling**. Take a load off your legs! Cycling on a stationary bike is …
- Baby Bump Fave: **Weight Training**. Light strength training can help you stay toned before and after
Step 4

• Decide how will evaluate success of intervention
• Log or document progress or feelings
Step 5

- Celebrate small steps to success
Activities to relieve stress

- Keep a positive attitude.
- Accept that there are events that you cannot control.
- Be assertive instead of aggressive. Assert your feelings, opinions, or beliefs instead of becoming angry, defensive, or passive.
- Learn and practice relaxation techniques;
- Eat healthy, well-balanced meals
- Learn to manage your time more effectively.
- Set limits appropriately and learn to say no
- Make time for hobbies, interests, and relaxation
- Get enough rest and sleep
- Seek out social support.
- Spend enough time with those you enjoy.
10 ACTIVITIES TO GET RID OF ANXIETY

1. Write a list of your skills.
2. Read it 2-3 times a day.
3. Do some yoga and meditation.
4. Exercise increases your endorphins.
5. Pinpoint contexts of stress in your life and figure out how to change them.
6. Try an alternative healing practitioner.
7. Spend time with people.
8. Have a routine.

www.HealthyPlace.com
Depression: fatigue, changes in eating habits, sleep disturbances

- Activities to decrease depression:
  - Healthy diet
  - Exercise
  - Meditate, read,
  - Yoga
  - Care for a pet
  - Gardening

https://www.everydayhealth.com/hs/major-depression-pictures/solo-activities-for-depression-loneliness
Activities to do along the way

**Physical activity**

walking (use of pedometers), swimming, stationary cycling, aerobics, water gymnastics / aerobics, resistance training, stretching, yoga, or pelvic floor training, strength, flexibility & joint mobilization activities, treadmill, resistance (biceps curls, arm & side lifts, knee extensions), pelvic floor training, swimming, dance, bend & stretch - relieves stress and improves self esteem \(^{16}\)

30 – 60 minutes, 3-6 x’s week
Diaphragmatic Breathing

1. Sit comfortably, with your knees bent and your shoulders, head and neck relaxed.
2. Breathe in slowly through your nose so that your stomach moves out against your hand. ...
3. Place one hand on your upper chest and the other just below your rib cage.
4. Tighten your stomach muscles, letting them fall inward as you exhale through pursed lips (see "Pursed Lip Breathing Technique"). The hand on your upper chest must remain as still as possible.

Do: 5-10 minutes about 3-4 times per day

Diaphragmatic Breathing Exercises & Techniques
Cleveland Clinic

https://my.clevelandclinic.org/health/articles/9445-diaphragmatic-breathing
Autogenic Training (AT)

• repetition of a word, sound, prayer, thought, phrase or muscular movement, through which concentration is achieved β) passive return to the repetition when other thoughts intrude.

• PNS calming: where Bp, heart rate, digestive functioning and hormonal levels return to their normal state\textsuperscript{17}  

See handout
Emotional Freedom Technique (EFT) Tapping

- tapping on nine acupoints, while speaking aloud a specific, meaningful short phrase increased acceptance, coping ability and health-related quality of life.

https://www.youtube.com/watch?v=6AW01rT92Ng
A happy and successful pregnancy and family
References


5. Porges, S.W., 2013; Info@polyvagalscience.com; Brain-Body Center, University of Illinois at Chicago.


