Research Plan

Question: How does pregnancy affect posture?

Hypothesis: As pregnancy advances, the backbone will show greater curvature.

Experimental Design:

Independent Variable: stage of pregnancy
Dependent Variable: angle of backbone from the vertical
Constant Variables: type of shoes worn
time of day
measuring tools

Materials Needed: plumb line, tape, calculator, pregnancy belly, ruler, pins, camera

Procedure:

1. Obtain subjects and get permission to take part in the experiment.
2. Mark a spot on the floor with tape.
3. For each participant, fasten plumb line to the center of the shoulder and have her stand so that the plumb bob is just above the spot on the floor.
4. Measure the length of the plumb line.
5. Have participant put on the pregnancy belly and load it for three months.
6. Locate the spot on the floor where the plumb line points, and mark it with tape.
7. Measure the distance between marks on the floor and record.
8. Add weight to the pregnancy belly to load it for six months.
9. Repeat steps six and seven.
10. Add weight to the pregnancy belly to load it for nine months.
11. Repeat steps six and seven.
12. Repeat the process with a minimum of 25 participants.
13. Use trigonometry to determine the angles and record.
14. Analyze data.