

## Analysis of seated force distribution patterns in hippotherapy participants

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**Study Design:** Mixed method, experimental design

**Objective:** The purpose of this study is to analyze the changes in force distribution of hippo therapy participants who are seated atop a pressure sensing system.

**Methods:** The subjects are students enrolled in a doctoral PT program who volunteered to participate in therapeutic riding simulations. The students will be randomly assigned to a riding style (either bareback, western, or English). Changes in force distribution patterns will be measured utilizing a force distribution sensing system laid atop a saddle. The sensing system will be connected to a lap-top computer and secured to the horse in a vented saddle-bag. Visual analog graphs that are derived from the force distribution mat will be compared and contrasted for each student, riding style, and amount of time spent riding.

**Results:** The sensor data obtained will be compared for the three riding styles and evaluated in relationship to therapeutic riding goals for patients with neuromuscular and postural control impairments.

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