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| Thesis Title                 | Effects of High Heeled Shoes on Posture during<br>Standing and Walking           |
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| Date of Graduation           | 18 April B.E.2540 (1997)   |

### ABSTRACT

This study investigated postural changes during standing and changes in lumbar lordosis and pelvic tilting during walking with different heel heights. In addition, this study compared changes in lumbar lordosis and pelvic tilting between standing and walking in different heel heights. Thirty female students, aged from 18 to 25 years, were analysed during standing and walking with four different heel heights (0,1.5,2.5,3.5 inches) by using a six camera Motion Analysis ExpertVision<sup>TM</sup> system. The parameters investigated during standing were head angle, thoracic angle, lumbar angle, pelvic tilt angle, pelvifemoral angle, knee angle and ankle angle. The parameters investigated during walking were lumbar angle and pelvic tilt angle.

The results indicated that there were significant differences among heel heights for head angle, knee angle and ankle angle ( $p < 0.05$ ) during standing. During walking, there were no significant differences among heel heights in lumbar angle and pelvic tilt angle. The statistically significant difference in lumbar angle between standing and walking was found only in barefoot condition ( $p < 0.05$ ). There were no significant differences in pelvic tilt angle between standing and walking in any heel height condition.

This study implied that although there were no changes in lumbar and pelvic tilt angles, there was compensation at knee joint and ankle joint as heel heights increased.