



THE IMPACT OF HIGH HEELS ON LOW BACK PAIN AMONG UNMARRIED AND MARRIED WOMEN

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ABSTRACT

Background: According to recent research, women who wear heels on a daily basis face permanent problems such as back pain as a result of the heels. A survey shows that women who wear heels more than 3 times a week are among 1/3 of them facing back pain on a permanent basis.^[16] The present study is to determine whether the high heels impact on the low back pain in the married and un married women. **Aim and Objective of The Study:** The aim of this study to find the impact of high heels on low back pain among unmarried and married women. To determine the impact of low back pain associated with wearing heels among married women and unmarried women. **Methodology:** 30 subjects of unmarried women and married women who are using high heels. Among 30 subjects 15 are married women, 15 subjects are unmarried women. Rolando Morris Questionnaire is a 24- item patient reported outcome measure that enquires about pain -related disability resulting from low back pain.^[17] Items are scored 0 if left blank or 1 if endorsed for a total Roland Morris Questionnaire score ranging from 0 to 24; higher scores represent higher levels of pain -related disability. **Result:** RMQ Scores of Married women (20.067) is greater than unmarried women (10.667). RMQ Score is around 2 times greater in married women. **Conclusion:** High heels have a significant association with the presence of low back pain. The data also suggests that the twice greater impact of high heels on the married women than the unmarried women. This study concluded that the impact of high heels on the married women than the unmarried women.

KEYWORDS: Low back pain, high heel, Roland-morris disability questionnaire.

INTRODUCTION

Low Back Pain occurred in approximately 80% of the population around the world once in their lifetime experience. LBP is the most commonly occurring musculoskeletal condition that disrupts nearly 80% of the population in their lives.^[1] high heeled footwear can damage the spine and feet if used excessively. They can change the alignment of the spine and feet can compromise muscle efficiency when walking, cause postural changes, and lead to discomfort and muscle fatigue in the lower part of the back, legs, and feet.^[2]

Walking is the most common form of human mobility. Heeled shoes make walking extremely difficult and disrupt the natural position of the foot-ankle complex. Consequently, all these chains reactions effects disturb the lumbar vertebrae. High heels are different from flat shoes. History shows high heels are considered a symbol of class and gender. Sometimes, high heel women do not maintain their balance and fall, which increases the chances of damaging the foot's soft tissues.^[3] When the foot is forward of the wearer, this puts pressure on the

lower back and later causes back pain. This study included adolescents who wore heels and had back pain. After wearing high heels, women have back pain. Many doctors and therapists, research on causes of foot pain due to high heels. High heel shoes cause increased lumbar lordotic and lumbar lordosis.^[4] Lateur et al 2017 from the University of Oregon showed that heels accentuating lordosis are not new. Vida beuhler used a conformer, a framework of horizontal wooden slats that slide to place their ends against the surface of the spine. Vida Beuhler finding was mixed with various participants has increased, decreased, or unchanged lumbar curves^[5] Miss Bennion's said that compensation for the heels takes place elsewhere. Then in the lumbar spine. Low back pain and the wearing of high heels are both quite common. This study provides information and treatment for women with lower back pain. Biomechanical effects of high heels and low heels on walking and they concluded there is decreased range of motion during stance phase with high heels and increased weight varying on the lower limb.^[6] Some

women wear heels to follow the fashion, but it has a bad effect on their bodies.

80 % of the population suffers from back pain during Their lifetime.^[7] wearing high heels is not only Deemed present fashion day and makes the wearer feel Taller, but also a passion, personal expression, source of authority, brand flaunt femininity, psychological Empowerment, and joy. It is a proven body that Causes health hazards, giving rise to a copy problem. High heel shoes put the foot in a plantar bending Position, which increases the pressure on the forefoot (the ball of the foot and toes).^[8] High heels cause several Problems such as low back pain, overworked muscles or injured leg, knee osteoarthritis, and plantar fasciitis. On Wearing shoes with high heels, mostly with the two Inches heel or above 2 inches, something that happens with the toes while wearing high-heeled shoes is that You slip your feet inside of your shoes and the next step That occurs is that you force your toes to move According to the shape of the shoe's inside after this false Redistribution of weight takes place.

Franklin et al^[9] mentioned physical therapists specifically, but Opila et al^[10] thought it to be a nearly universal perception regardless of practitioners' discipline. Informal queries of this author's chiropractic colleagues have mostly yielded answers consistent with this view. One colleague outlined a model of how increased ankle plantarflexion caused a kinetic chain of compensation up the lower extremity that ended with hypertonic psoas muscles producing a lumbar hyperlordosis. Although his ideas sound logical, published research casts doubt on the high-heeled-shoes-increased-lordosis relationship. The question of whether heels accentuate lordosis is not new, as de Lateur et al^[11] showed in locating a 1932 master's thesis⁴ from the University of Oregon. Vida Beuhler used a Conformateur, a framework of horizontal wooden slats that could slide to place their ends against the surface contours of the spine; her findings were mixed, with various participants has increased, decreased, or unchanged lumbar curves.^[12]

Mosner Et al^[13] and Bryan et al^[14] found that the perceptions of Physical therapists were influenced by soft tissue Contours; increased "gluteal prominence" may be Inaccurately perceived as an increased lordosis. Considering that some studies found a tendency for the pelvis to tilt more posteriorly with high heels, adopting a compensatory posture for heels may require Greater gluteal contraction and could therefore increase the Visual prominence of these muscles. Our goal was to provide a better understanding of the impact of high heels on low back pain among married and unmarried women.

AIM

This study aims to find the impact of high heels on low back pain among unmarried and married women.

OBJECTIVE

The objective of this study

To determine the impact of low back pain associated with wearing heels among married women.

To determine the impact of low back pain associated with wearing heels among unmarried women.

BACKGROUND OF THE STUDY

Women have worn heels for centuries all over the world, and it is now an important part of women's fashion not only in the West but also in India. According to recent research, women who wear heels daily face permanent problems such as back pain as a result of the heels. A survey shows that women who wear heels more than 3 times a week are among 1/3 of them facing back pain permanently.^[16] The present study is to determine the impact of the high heel on low back pain in married and unmarried women.

NEED OF THE STUDY

This article presents statements from several sources aimed at the general public of this assumed cause and effect, along with a literature review of available research in this area. Because low back pain and the wearing of high heels are both quite common, the information presented here has implications for evidence-based care in the evaluation and treatment of women with low back pain. The Need of this study is to determine whether high heels impact low back pain in married and unmarried women.

METHODOLOGY

STUDY DESIGN

Observation study

SAMPLE SIZE

30 samples

STUDY SETTING

Home based setting

STUDY POPULATION: 30 subjects of unmarried women and married women who are using high heels. Among 30 subjects 15 are married women, 15 subjects are unmarried women.

SAMPLE TECHNIQUE: Simple random sampling.

INCLUSION CRITERIA

Participants were volunteers to participate in the study

Women wear heels above the age of 19-40years.

Women wear heels for at least the 5-6 hours /day

Women wear heels ranging from 2 to 5 inches in height.

EXCLUSION CRITERIA

A patient who had any foot deformities by birth.

A patient has a recent history of ankle sprain and strain.

Patient with any fracture of the foot or lower limb.

Previous heel surgery.

OUTCOME MEASURES**ROLAND MORRIS QUESTIONNAIRE.****PROCEDURE**

We collected data from 30 women who were wearing high heels and experiencing back pain as a result of high heel wear via questionnaire 30, and we collected data from ladies who volunteered to participate in our research study. We divided women into two groups unmarried and married women in an observational study. We collected information from the women by using a Rolando -Morris Disability questionnaire, and their responses were observed or noted.

Roland-Morris Disability Questionnaire

Rolando Morris Questionnaire is a 24- item patient-reported outcome measure that enquires about pain-

related disability resulting from low back pain.^[17] Items are scored 0 if left blank or 1 if endorsed for a total Roland Morris Questionnaire score ranging from 0 to 24; higher scores represent higher levels of pain-related disability. Typical Roland-Morris questionnaire test-retest estimates are in the range of 0.79 to 0.88 points for relative reliability (Intra class correlation) and 1.7 to 2.0 points for absolute reliability (SEM).^[18,19] The threshold for important change has been estimated to be approximately 5 RMQ points.^[19,20,21]

STATISTICAL ANALYSIS

t-Test Result for Datasets:

Descriptive Statistics**Table 1: t-test analysis of RMQ Score Married and Unmarried Women.**

Variable	Mean	Std dev.	Std error	Lower 95%CL	Upper 95%CL	N
Married RMQ score	20.067	2.987	0.771	18.412	21.721	15
Unmarried RMQ score	10.667	4.320	1.116	8.274	13.057	15

1-tailed t-test

Married RMQ score > Unmarried RMQ score

Table 2: t value and p-value of RMQ Score Married and Unmarried women.

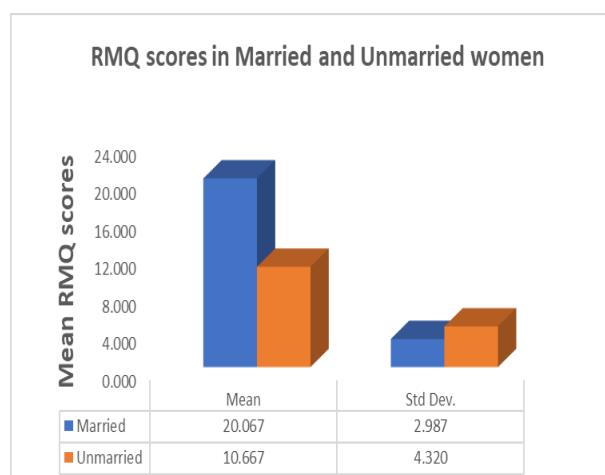
HO Diff	Mean Diff	SE Diff	t-Value	DF Value	P-Value
0.000	9.400	1.356	6.931 significant	28.00	P<0.01

Inference:

t-value 6.931 is significant $p < 0.01$. Hence RMQ Scores are significantly different.

RMQ Scores of Married women (20.067) are greater than unmarried women (10.667).

RMQ Score is around 2 times greater in married women.



Mean difference RMQ score between married and unmarried women

RESULT

Based on the statistical analysis. Table 1 shows that the t-value of 6.931 is significant $p < 0.01$. Hence RMQ Scores are significantly different. RMQ Scores of Married women (20.067) are greater than unmarried women (10.667). RMQ Score is around 2 times greater in married women.

DISCUSSION

Most studies of the relationship between high-heeled shoes and lumbar lordosis have found either a decrease of the lumbar curve or no significant effect. The purpose of the current research is therefore to explore the content impact of high heels on low back pain of the RMDQ; to qualitatively explore the patient experience of chronic low back pain to understand what aspects of everyday functioning are most impacted by chronic low back pain.

The current results are supported by Schroder et al^[22] who investigated the impact of wearing personalized high heels on the woman's posture at different ages and found that KA remained unchanged in younger wearers. Also, it is supported by the previous study of Weitkunat et al^[23], who investigated the influence of high-heeled footwear usage on the sagittal balance of the spine and the whole body (using a whole-body photograph) and

found that there were no statistically significant changes of thoracic kyphosis and lumbar lordosis in high-heeled footwear. Furthermore, our findings are confirmed by Itunes *et al.*^[24], who evaluated the influence of high heels on body posture among adult women and found no changes in LA, KA, and pelvic tilt concerning the frequency of high heel usage and shoe types.

While the RMDQ is a commonly used measure and performs well as a measure of physical functioning in CLBP, a literature review and gap analysis were undertaken as part of this project to identify a lack of documented content validity evidence. Although the common use of the RMDQ may suggest acceptance within the clinical community of content validity, this must be documented and shown qualitatively through direct feedback from patients to meet current standards of good practice.^[25-27]

High-heeled shoes can be detrimental to the spine because wearing high heels bioelectrical activity of the erector spinae muscle increase and ground reaction forces increase, both of these affect the spine and lower limb. Regular wearing of High heels is harmful to the spinal column and further causes long-standing weakness of the muscles along the spine. One of the studies showed that EMG activity of erector spinae muscle increases in young and middle-aged women with High heels, due to which muscle fatigue and biomechanical changes occur and causing backache in females.^[25] In the previous study, a significant association between high heels and lower back pain was investigated and, as heel height increased, the presence and intensity of lower back pain were greater. These findings are supported by the study conducted by Mika in 2013 that high heels alter EMG activity of back and hip muscles and cause musculoskeletal problems.^[9]

Our study finds that Married women who wear high heels for a prolonged period more often suffer more from Low back Pain than Unmarried women. Similar to this, a study had shown that wearing high heels for long periods can cause the spine to become hyperlordotic. A hyperlordotic spine has too much curvature in the lumbar spine of the vertebra or the cervical regions of the spine. This can be painful due to tension in the lower back and legs which is a possible cause of LBP.^[28]

LIMITATION

There are some limitations in this study the relatively smaller sample size.

This study used patient-specific goals, but no overt attempt was made to link these goals to functionality.

SUGGESTIONS

Further study is necessary to cross-validate our estimate and to examine the stability of the estimated value in patients with diverse demands in terms of activities of daily living.

Further study can be done with other functional scales.

Further study can be investigated the heel, hip, and knee pain due to high heels.

CONCLUSION

High heels have a significant association with the presence of low back pain. The data also suggests that the a twice greater impact of high heels on married women than the unmarried women. This study concluded that the impact of high heels on married women than that on unmarried women.

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