

Carrying a Wallet in the Back Pocket and its Relation to Spinal Injuries in Males Aged 20 to 40 Years

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Abstract

The aims of this study were to develop a spinal lesion scale for the research sample, to assess the level of spinal cord damage among the research participants, and to find out what a wallet in your back pocket has to do with spinal injuries. The researcher hypothesized that there is a statistically significant relationship between carrying a wallet in the back pocket and spinal injuries. The study sample was limited to 200 people. The sample was limited to males aged 20–40 years and may not be representative of other age groups and females. The researcher extracted the following data from the individuals using the statistical bag (SPSS), arithmetic mean, independent samples (t) test, and percentage.

The researcher applied the proper statistical procedures and discovered a statistically significant correlation between holding a wallet in a back pocket and spinal injury. The researcher suggested the wallet should be kept in the front pocket or in a separate bag/handbag. Also, practice stretching the piriformis muscle and pelvic muscles to equalize the sometimes-pressure that the body was subjected to.

Keywords: Spinal Injuries, Spinal Cord Damage, Carrying a Wallet in the Back Pocket.

1. Definition of Research

1.1 Introduction:

The society suffers from many health problems due to the occurrence of some changes in the daily lifestyle, the abundance of office work, and dependence on technological means to complete these works, and these works require a person to stay sitting for long hours, which leads to the occurrence of many physical problems, including pain in the spine. (Van Tulder, Maurits, 19, 2000)

Back and spine pain are the most common problems of our time, and they are not limited to the elderly only but have become a problem suffered by all age groups, and the shock lies in the fact that most of these injuries are not caused by long sitting and lack of movement or major accidents, but there are some wrong habits that we practice every day without awareness of their consequences that lead to these pains; the most prominent of these habits is the wallet making a problem when getting seated. (Viggiani D, Noguchi, no. 7, 2021)

Many people may ignore this simple practice and be unaware of its negative effects on the spine in the future; it may cause an imbalance in the body that forces the spine to bend abnormally to compensate for the height difference, and this affects the nerves, blood circulation, and the efficiency of general motor performance, which hinders a person to fully practice his normal life. (Papadopoulos, Elias C, no. 65, 2004)

Recently, we have witnessed a significant increase in many physical complaints that affect this has made this problem a societal phenomenon that requires careful study and analysis.

The importance of the research is to identify the relationship between carrying a wallet in the back pocket and spinal injuries.

1.2 The Research Problem:

There are many people who have some wrong habits, including putting a wallet in the back pocket, and they are unaware of its negative effects on physical health, specifically spinal injuries. (Tonley, Jason C, no. 11, 2004)

It may be the hidden cause behind your chronic back pain, and the danger lies in the fact that the injury does not occur suddenly, but as a result of the accumulation of repeating the error until it becomes part of a person's motor identity and this will affect his performance and inability to practice his daily life normally.

Hence, the research raises a fundamental question:

The problem is that putting a cash wallet in the back pocket negatively affects the spine.

1.3 Research Objectives:

- Identify the construction of the spinal injury scale for the research sample.
- Identify the degree of spinal injuries of the research sample.
- Identify the relationship between carrying a wallet in the back pocket and spinal injuries.

1.4 Hypothesis:

A statistically significant relationship between carrying a wallet in a back pocket and spinal injuries.

1.5 Study Limitations:

This study is limited to males aged 20–40 years and may not be representative of other age groups or females. The data are based on participants' responses regarding their wallet-carrying habits and spinal complaints. The study design aims to establish correlations, not causation. Furthermore, factors such as occupation, physical activity, body mass index, posture, prolonged sitting, previous injuries, and wallet size or thickness may influence the results and could not be fully controlled.

1.6 Search Terms:

Spinal injuries: The researcher defines it as "a group of damages that affect the vertebrae, ligaments, and cartilage in the spine that cause severe pain and are the result of diseases, accidents, or wrong practices).

2. Search Procedures

2.1 Research Methodology:

The descriptive method in a correlational style because it was appropriate to the nature and problem research.

2.2 Research Community and Sample:

The research population consists a group of (male) people from Nineveh Governorate ranging from (20-40) years old for the year (2025-2026), numbering (200) people and were selected in a deliberate way (who put the wallet in the back pocket and sit for long periods) and (180) people were selected from the research community as a constructive sample of the total research community, which included the sample of statistical analysis chosen by the random method of (180), as well as the sample of the survey experiment of the scale, which the study required other samples, including a sample for consistency. The researcher distributed a questionnaire to 30 people randomly from the construction sample for the purpose of conducting the reliability process (by way of test retesting), and the researcher excluded 10 people due to their failure to complete the answer to the vertebrae of the spinal injuries scale.

2.3 Search Tools:

2.3.1 Questionnaire:

A questionnaire was distributed to a number of people to collect data on the number of hours of sitting with the wallet in the back pocket of the trousers, whether they had experienced a particular accident, and the frequency of feeling pain.

2.3.2 Building a Spinal Injuries Scale:

The current research required building a spinal injuries scale for males aged 20-40 years. The researcher followed a number of procedures in order to prepare the scale. These procedures included determining the purpose of the scale to be used, identifying the axes and drafting paragraphs for each axis in accordance with the current research sample and testing their honesty and validity to measure for the scale.

- **Objective of the Scale:** to identify spinal injuries.
- **Axes of the Scale:** identified based on previous studies.
- **Drafting Paragraphs for Each Axis:** the previous studies and the open questionnaire were

used to formulate the paragraphs of the scale.

- **Distribution of the Scale to Experts:** the scale was distributed to experts and specialists in the field of medicine to identify the suitability of the vertebrae and the scale for measuring spinal injuries.

- **Scientific Conditions of the Scale:**

- **Honesty:** The scale's validity was confirmed using face validity, as the scale was presented in its initial form to experienced and specialized gentlemen in the field of medicine to indicate their opinions and the suitability of its vertebrae to measure spinal injuries in males ages 20-40. Put a check mark (true) in front of each paragraph and under the appropriate alternative (always, often, sometimes, rarely, or never) as well as write down the appropriate amendment in the (Notes) field and the law of The percentage of expert agreement was used to determine the scale's validity. Bloom states that "an agreement of 75% or more of expert opinions is required for this type of validity" (Bloom et al., 1983, p. 126), under this statistical procedure, no item was excluded because it achieved an agreement rate between 75% and 100%, thus establishing expert validity. Since the scale achieved this level of expert agreement, it is considered an objective measure.

- **Stability:** The researcher used the split-half method with odd and even items to determine the reliability coefficient of the scale. (30) Test forms were randomly corrected from the construct sample population after the non-distinguished items were taken away from the scale. They then split their answers into two. The first part represented the items with odd sequences, and the second part represented the items with even sequences. Each individual had two scores, odd and even. The simple correlation coefficient was used between the scores of the two halves of the scale, and the value of (R) was (0.75). The correlation between the scores of each of the two halves of the test is considered the internal consistency of the two halves of the test only and not the entire test" (Stephen P. Burns, no.116, 2025). The correction was performed by the use of the Spearman-Brown equation, and an unbiased estimate of the reliability of the complete scale was produced as well as the value of the overall reliability coefficient of the spinal cord injury scale (0.86). This indicates a good reliability coefficient for the scale. (0.86). Therefore, this means that the scale has a high reliability coefficient.

- **The Survey Experiment of the Scale:**

The researcher conducted an exploratory study on a sample of (20) people who carry a wallet in their back pocket on the date (22/1/2026) to answer the items of the scale consisting of (16) items. The purpose of conducting the exploratory study was as follows:

1. How clearly the items are visible to sample.
2. Make sure the scale instructions are clear.

3. Answer all questions and inquiries, if any.
4. Find out how appropriate this scale is to the level of the research sample.
5. Identify, correct and correct scale errors.
6. Identify all possible obstacles and difficulties that may arise and try to overcome them.
7. Delete unclear or ambiguous paragraphs or phrases and replace them with clearer phrases.
8. Applicability and Comprehensibility of Options to Players.
9. Create the final picture of the paragraphs before the statistical analysis. The items of the scale were understandable and evident to the sample, and there was no ambiguity or inquiry about the items of the scale. The response time for the staff was 10-15 minutes.

- The Main Experiment of the Scale:

The researcher conducted the main experiment on a sample of (180) male persons aged 20–40 years on a date (2/2/2026) to answer the paragraphs of the scale consisting of (16) paragraphs.

2.4 Statistical Methods:

The researcher used the statistical bag (SPSS) to obtain the following data.

- Arithmetic Average.
- Standard Deviation.
- Pearson correlation coefficient.
- Independent samples t-test.
- Percentage.

3. Discussion of Results

The study goals and hypotheses are stated as follows: The statistical data gathered from the research sample will be presented and evaluated.

3.1 First Objective:

To establish a scale of spinal cord injury for the sample studied. The procedures described in section three achieved the first scientific process aim.

3.2 Second Aim:

To define the incidence of spinal injuries in the population under study. The second purpose was to examine the members of the research sample. Quantify the spinal pain in the research sample using the Spinal Injury Scale. The level of pain in the study sample was assessed with the total score of the scale, and the details are given in Table

Table (1): The arithmetic mean, standard deviation, hypothetical mean and t-test result for the research sample on the spinal cord injury scale

Statistical indicators The scale	The sample	Arithmetic mean	Standard deviation	Hypothetical average	Calculated value (t)	sig	Semantics
Spinal injuries	180	118.00	5.510	88	74.182	0.00	Significant

Significant at a significance level of $\leq (0.05)$

The data in Table (1) reveals that the arithmetic mean value of the answers of the study sample on the spinal column damage scale was 118.00 degrees, and the standard deviation was 5.510 degrees, and the hypothetical mean for the scale was (88) degrees. The computed (t) value was (74.182) at a significance level of (0.05) which is less than the accepted significance level of (0.05) using (t) test for single sample. This indicates that there are many causes that overlap and complement each other with regard to the topic of spinal pain in the research sample, where the researcher attributes the current result to the fact that the researcher goes in his interpretation of this topic through three Vocabulary (putting the wallet in the back pocket and sitting for long periods, thickness of the wallet, age category). (Fishman, Loren M, no.3, 2002)

Problems are simple everyday behaviors that we don't pay any attention. A little piece of skin can create discomfort and abnormalities in the spine without experiencing. (Beaton, Lindsay E, no.88, 1983)

It is evident from the previous results that there is a consensus with contemporary medical studies in the domain of physical therapy with a research sample of (180) persons that there is limited awareness of injuries and actual pain from this wrong daily conduct, which necessitates the need to inform the emptying of pockets before sitting for long periods.

3.3 Third Aim:

To determine the association between a wallet in the back pocket and spinal injury. The third target was shown to be procedural by the total of the processes that the researcher followed in the construction of the program according to the scientific bases mentioned in the third section of the table below.

Table (2): Shows the statistical figures of the correlation between having a wallet in the back pocket and spinal injuries

The variable	The sample	Arithmetic mean	Standard deviation	Hypothetical average	Calculated value (t)	sig	Semantics
The relationship between carrying a wallet in the back pocket and spinal injuries	180	4.12	0.75	3	20.03	0.00	Significant

The arithmetic mean of the respondents' comments on the relationship between carrying a wallet in the back pocket and spinal injuries is (4.12) with a standard deviation of (0.75) as shown in Figure 3. The estimated value of "T" (T) was (20.03) and it was statistically significant at the significance level

(≤ 0.05) where the probability value (sig) was (0.000) when the mean of this was compared with the default mean of the instrument (3.00). (Viggiani D, no.23, 2021)

The study based on the high value of the (T) test shows that the carrying of a wallet in the back pocket represents dangerous conduct for the structural strength, which demands critical information and application advice about the health to which it is exposed.

4. Summary and Suggestions

4.1 Conclusions:

The researcher has been able to obtain a number of results and findings that can be categorized under the following headings:

- There was a statistically significant association between using a back pocket wallet and spinal injury.
- The appearance of significant injuries and deformations of the research sample due to the placement of the wallet for long times in the pocket for Sitting, especially when doing office work.
- The appearance of injuries to the pelvic muscles and bones as a result of long sitting.

4.2 Suggestions:

- The necessity to keep the wallet in the front pocket or in a separate bag/handbag.
- Eliminate unnecessary documents and cards to slim down the wallet.
- Awareness to bring in the implications of this simple habit in organizations like workplaces, banks and long-distance truckers.
- Doctors and physical therapists should enquire about wallet usage and sitting patterns before diagnosing back problems.
- Practice to stretch the piriformis muscle and pelvic muscles to equalize the pressure the body was subjected to, sometimes.
- Recommendations for manufacturers of clothes, panty design with a special pocket for the wallet in the side or front of the pants so it does not affect the balance of the body when sitting for long periods.

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