

Comparing Work Related Injuries between Sonographers and Occupational Therapists: A Retrospective Analysis

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Abstract

Objective: The research conducted was to compare and contrast work related injuries due to poor ergonomics between sonographer and occupational therapy professionals.

Introduction: Work related injuries are more prevalent in Sonographers compared to Occupational Therapists. This research will continue the discussion of the differences and similarities between work-related injuries amongst Sonographers and Occupational Therapists, ergonomics, types of injuries, and the importance of injury prevention.

Method: Research was conducted with fifteen articles and twelve were used. A literature search was performed in SDMS. Type of research was a literature review. There was a limitation on language and publication date. The literature review was conducted with articles from 5 years or less.

Conclusion: This literature review found the two professions, Sonography and Occupational Therapy, have more similarities in work-related injuries than originally expected. Both professions experience carpal tunnel syndrome as well as wrist, elbow and shoulder injuries. In contrast, sonographers suffer from eye strain more so than occupational therapists. Overall, Work related injuries are more prevalent in sonographers than occupational therapists.

What is Ergonomics?

Ergonomics is, “The scientific discipline concerned with the understanding of interactions among humans and other elements of a system, and the profession that applies theory, principles, data, and methods to design in order to optimize human well-being and overall system performance” (International Ergonomics Association). Figure 1 represent proper ergonomics in sonography and figure 2 represents poor ergonomics. Figure 3 represents proper ergonomic sand figure 4 represent poor ergonomics.

What are Work Related Injuries?

Work related injuries are defined as a specific incident at work causing an injury, repetitive actions resulting in injury, or aggravating a pre existing injury due to working.

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Sonographers

There are several causes of work related injuries amongst sonographers that include...

- Repetitive motions
- Awkward postures
- Contact pressure

Poor ergonomics amongst the sonography community include...

- Poor posture (such as leaning over the patient)
- Excessive flexion/extension of the arm with no support underneath
- Having the ultrasound machine too far away
- Leaning against the bed while scanning

Specific types of work-related injuries in sonography include...

- carpal and cubital tunnel syndrome
- epicondylitis of the elbow
- shoulder capsulitis
- Tendonitis
- neck and back strains

Ways to prevent work-related injuries include...

- Placing ultrasound equipment closer to the sonographer
- Performing good posture
- Continuing education on work-related injuries and prevention

Occupational Therapists

Causes of work related injuries among occupational therapists

- Repetitive motions
- Over exertion of specific body parts
- Improper lifting techniques

Poor ergonomics seen in occupational therapists

- Poor posture
- Lifting with back and not knees
- Over extension of elbows

Specific type of work related injuries seen in occupational therapists

- Carpal tunnel syndrome
- Shoulder tendonitis
- Tenosynovitis
- Shoulder capsulitis

Ways to prevent injury

- Lifting with knees instead of back
- Keep patient close to body when lifting to lessen stress on back
- Keep elbows close when performing manual therapy
- Stretch between patients



Figure 1: DMS Senior performing good ergonomics and good posture while scanning



Figure 2: DMS Senior performing bad ergonomics and poor posture while scanning



Figure 3: OT Graduate Student performing good ergonomics and good posture while moving a patient



Figure 4: OT Graduate Student performing bad ergonomics and poor posture while moving a patient.