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Relationship between Low Back Pain and types of Office, Home and Car Seats in Sultan Qaboos University Staff

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Objectives: Sitting is something reflects the art between the bony skeleton and other soft tissue like muscles and ligaments, and these all controlled by nerve structures and higher brain function. Low back pain can sometimes begin without warning due to the fact that discs and cartilage do not have nerve supply. LBP is a constellation of symptoms that is usually acute and self-limiting. However, prolongation of such pain leads to chronic low LBP, the cause of which can be iatrogenic in many instances. Low back pain is the most reported disease because the low back supports most weight of the human body when sitting or standing, and the majority of the muscular activities take place in this region.

Aim: The aim of this investigation was to study the prevalence of low back pain (LBP) and its relationship to chair designs and sitting postures in Sultan Qaboos University (SQU).

Methods: A cross-sectional survey using a standardized questionnaire with established reliability and validity. The questionnaire sought information on social and demographic characteristics, history of LBP, its duration, number of hours spent sitting in office, car and at home, job type, severity of LBP, factors predisposing to LBP and types of treatment used. All participants of study were consented using a signed and attended consent form.

Results: Three hundred subjects, 174 males and 126 females aged 20 - 60 years participated in the study. The prevalence of LBP among SQU staff was 44.7% of whom 68% had LBP for ≥ 1 year and 66% had LBP for < 1year. Those who had LBP for ≥ 1 year were mostly bellow 50 years of age.

Discussion: The prevalence of LBP among SQU staff was 44.7%. In this study, the prevalence of LBP was higher among men than women. Some studies have reported opposite trend and others have shown no gender differences. A Study done in UAE showed that the prevalence of LBP was higher in women than in men. In the present study, the prevalence of LBP was higher amongst doctors, technicians

and administrators than in teachers and manual workers. A previous study showed that the prevalence of LBP was highest among nurses followed by administrators and cleaners. Some studies associated LBP with heavy physical work, bending, poor posture and prolonged sitting or standing. The prevalence of LBP was higher in subjects using dynamic chairs with fixed ratio between the base and the back of the chair than those using fixed chair with back and pelvic support. Also, the study results showed a significant relationship between LBP duration and the use of dynamic chairs with fixed arm supports ratio.

Future Directions: Health education on posture and the best types of office, car and home seats should be introduced in the workplace to reduce the burden of LBP to the patient and to health authorities. Future researches should focus on expanding this study to a spectrum of local manufacturers to help design better chairs and advice on their optimum use.

Conclusion: It was found that the prevalence of LBP in SQU was higher among doctors (50.0%), technicians (48.1%) and administrators (46.9%) than in teachers (42.9%) and manual workers(22.2%).The study also showed a significant relationship between the duration of sitting in home chairs and LBP.

Speaker Biography

Tariq Al-Saadi is a Neurosurgical resident at McGill University-Montreal Neurological Institute in Canada. Graduated first rank with distinction from Sultan Qaboos University in Oman in 2016. After completing his internship, he joined the Department of Neurosurgery at Khoula Hospital, which is the National Trauma Center in Oman. Throughout his undergraduate and post graduate years, he has been an active member of various surgical societies with high passion for research and medical education. Has been invited as a speaker to several national and international meetings and has published in various peer reviewed journals. He is an editorial board member of the Gulf Research Collaboration Group (GRCG), which is established to conduct multi-centric high-quality research in the Gulf area.

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