Nomogram: Instrument for selection of possible cases of low back pain

Beatriz Minghelli[1], Carla Nunes[2] and **Raul Oliveira[3]**
[1]Piaget Institute, Portugal
[2]NOVA University of Lisbon, Portugal
[3]Technical University of Lisbon, Portugal

Low back pain (LBP) has become a growing public health problem in adolescents, being commonly associated with the demand for health care, increasing absenteeism and with a decrease in life quality. Several studies verified the prevalence of annual LBP in the world and the values varied between 13% and 51%. In southern Portugal, 966 adolescents were evaluated, aged between 10 and 16 years and the results revealed that 15.7% of students had LPB at the present time, 47.2% had experienced it in the last year and 62.1% had lifetime prevalence of LBP. Several factors may be involved in the pathogenesis of LBP, such as physical, genetic, mechanical, behavioral and environmental factors. This study showed that girls have 2.05 more probability of presenting LBP than boys (95% CI: 1.58-2.65; $p<0.001$), and older students have a 1.54 greater probability (95% CI: 1.19-1.99; $p=0.001$). Students who sit with the spine incorrectly positioned presented 2.49 greater probability of having LBP (95% CI: 1.91-3.2; $p<0.001$), students using improper positions for watching TV or playing games have 2.01 greater probabilities (95% CI: 1.55-2.61; $p<0.001$), and those who adopt an incorrect standing posture have a 3.39 greater chance of experiencing LBP (95% CI: 2.19-5.23; $p<0.001$). The results of this final model were complemented by a nomogram that corresponds to a graphical representation of mathematical model of probability calculation, which provides an individualized risk estimate that considers characteristics of a single individual, being based on evidences obtained from a population group. Nomograms simultaneously consider multiple risk variables in an individual, identifying associated factors that contribute to individual risk information and stratification. The nomogram could be a quick and practical measure instrument to be used in LBP screening.

Biography

Beatriz Minghelli is an Adjunct Professor in the School of Health Jean Piaget, Piaget Institute of Study Cycles in Physiotherapy and Nursing since 2006. She has completed her PhD in Public Health, Epidemiology specialty in the National School of Public Health, NOVA University of Lisbon, Portugal, Master of Science in Physical Therapy from the School of Human Kinetics, University of Lisbon, Portugal and is a Physiotherapist by Education School Helena Antipoff, Rio de Janeiro, Brazil. She has 24 publications in national and international journals and participated in several scientific events. She is a Reviewer of scientific article for several journals and is a Member of the Editorial Board of the Journal *Austin Spine*, *EC Orthopaedics* and *Research and Reviews*. Her most investigations are related to epidemiology studies, including obesity, low back pain, scoliosis, postural changes, injuries in different sports (soccer, surf, cycling and martial arts).

beatriz.minghelli@silves.ipiaget.pt

Notes:

Orthop Muscular Syst
ISSN: 2161-0533 OMCR, an open access journal

Orthopedics 2017
July 12-13, 2017

Volume 6, Issue 3 (Suppl)

Page 38