

# **Systems Approach to Low Back Pain**

**Alma Maria Jennifer A. Gutierrez**

*Industrial Engineering Department*

*De La Salle University*

*jen\_gutierrez@yahoo.com*

## Abstract

The human body can be likened to a system. The human body consists of organs, tissues and cells. If one part of the body system is not functioning very well, a health problem may be apparent. The low back can be considered a subsystem of the larger skeletal and muscular system of the human body. It consists of the bones and inter-vertebral discs that form the lower part of the spinal column. This site of the body had been the object of complaint of most industry workers, which is called low back pain. LBP can be a disabling disease. Aside from the misery that it brings to those who experience it, the cost associated to its cure is very high. It causes severe emotional, physical, economic and social stress that negatively affects the families of those afflicted (Croft & Rigbi, 1994). The first part of the paper discusses the anatomy of the spine for the purpose of illustrating the ideal system and its components and functions (real system). The second part explains how researchers interpreted the structure of the lower back through systems models. The models discussed are biomechanical illustrations of the back that aid clinicians in diagnosing the causes of the problem. The third part discusses how the problem of LBP is mitigated through clinical and rehabilitative interventions (designed model). Finally, the last part tackles how the interventions discussed have solved LBP problems considering the advantages and disadvantages (implemented model).