

## Chapter 24

# Knowledge Management of Work Stress in Mexican Manufacturing Environments: Models of the Relationships Between Burnout and the Body Mass Index Among Middle and Senior Managers

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### ABSTRACT

*This chapter presents a knowledge management perspective to propose a pair of structural models to determine the relationship between burnout syndrome (BS) and body mass index (BMI) among high and middle managers of Mexican maquiladoras. In developing countries like Mexico there are opportunities to expand burnout study on diversity of contexts and occupations. The Maslach burnout general inventory questionnaire (MB-GI) was used, and sociodemographic data were collected as well as the weight and size of respondents. Instrument shows an acceptable reliability index. Structural equation models are used to determine relationship among variables. From a sample of 361 people, using segmentations of BMI, two segments are distinguished: normal weight and overweight. Model using normal weight participants shows more explanatory qualities about the relationship among burnout dimensions than the one using overweight participants. One can conclude that more factors and variables are needed to explain overweight Mexican managers.*

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## **INTRODUCTION**

The concept of Burnout Syndrome (BS), was first introduced by Bradley 1969. BS directly affects individuals and is characterized by excessive and progressive fatigue, energy depletion, and motivation loss. Also, according to Freudenberger (1998), BS affects attitudes, modals, and behaviors in general, which is why it is important to study it. Likewise, as Gonzales and Guillermo (2009) argue, research on BS first appeared in 2000. Since then, many studies have been conducted across industrial sectors. For instance, Medellín (2008) reported a study of BS in the automotive industry, whereas Aguirre, Medellín, Vázquez, Gutiérrez, and Fernández (2014) reported the effects of this syndrome in the assembling industry. Likewise, Aranda and Ibarra (2014) discuss BS in the electronics industry.

According to Llana (2002), it has been demonstrated that the prevalence of work-related diseases or multi-causal diseases – especially those related to stress – increases exponentially in developing countries. In their model, Serrano, Moya-Albiol & Salvador (2009) prove that occupational stress is at the adaptive stage in human beings. When the adaptive response is not positive, chronic stress appears, along with BS. Both stress and BS are considered to be pathological conditions. In Mexico, BS has been studied only among helping professions, such as nurses, physicians, and teachers (Juárez-García, A., Idrovo, A. J., Camacho-Ávila, A., & Placencia-Reyes, O., 2014), whereas other occupations have been neglected. Although BS research in the industrial context is scarce, it has been demonstrated that BS is present in industrial workers (Camacho-Alamilla, Maldonado-Macías, García-Alcaraz, Hernández-Arellano, 2014; Maldonado-Macías, Camacho-Alamilla, Torres, Alcaraz, Limón, 2015; Armenta-Hernández, Maldonado-Macías, García-Alcaraz, 2015).

The few works studying occupational stress along with BS have found that both conditions are inter-related. Also, Ahola et al. (2012) found that professional efficacy directly reduces overweight, although authors did not find any other relationship between the remaining BS dimensions and stress at work. Similarly, both BS and stress do not seem to be studied together in relation to obesity and overweight, especially in the manufacturing industry. To overcome this limitation, authors (Camacho, Maldonado, García, Palacios & Valenzuela, 2015) proposed a structural equation model associating BS and obesity among middle and senior managers of manufacturing companies in Ciudad Juárez.

## **PROBLEM STATEMENT**

Two mayor aspects were consider in this research, first, the incidence of stress-related disorders in Mexico is increasing; second, available studies on BS have not provided clear results as regards the relationship between BS and the different BMI levels.

According to a study conducted by the International Labour Organization (ILO, 2016), 40% of Mexican workers – that is, 18.4 million people – suffer from stress, and 75% of such people associate their condition to work-related situations. In this sense, stress can represent between 0.5% and 3.5% of losses in a country's (Gross Domestic Product) GDP. Additionally, on a world scale, the WHO stated that while cardiovascular diseases were the first cause of death globally, overweight and obesity were two other major causes.

Health disorders affect an individual's capacity to perform their daily activities, thereby causing low productivity and quality losses, among other repercussions (Forbes, 2011; Marrau, 2009). At the company level, the consequences of health disorders have a negative impact on production costs (Arenas &

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