# Chapter 15 Applying Bayesian Networks in the Early Diagnosis of Bulimia and Anorexia Nervosa in Adolescents: Applying Bayesian Networks in Early Diagnosis in Adolescents

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# ABSTRACT

The diseases and health problems are concerns of managers of the Unified Health System has costs in more sophisticated care sector are high. The World Health Organization focused on prevention of chronic diseases to prevent millions of premature deaths in the coming years, bringing substantial gains in economic growth by improving the quality of life. Few countries appear to be aimed at prevention, if not note the available knowledge and control of chronic diseases and may represent an unnecessary risk to future generations. Early diagnosis of these diseases is the first step to successful treatment in any age group. The objective is to build a model, from the establishment of a Bayesian network, for the early diagnosis of nursing to identify eating disorders bulimia and anorexia nervosa in adolescents, from the characteristics of the DSM-IV and Nursing Diagnoses The need for greater investment in technology in public health actions aims to increase the knowledge of health professionals, especially nurses, contributing to prevention, decision making and early treatment of problems.

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## INTRODUCTION

The diseases and health problems are concerns of managers of the Unified Health System, in Brazil, has costs in more sophisticated care sector are high. Currently, the World Health Organization focused on prevention of chronic diseases to prevent millions of premature deaths in the coming years, bringing substantial gains in economic growth by improving the quality of life. Few countries appear to be aimed at prevention, if not note the available knowledge and control of chronic diseases and may represent an unnecessary risk to future generations. Early diagnosis of these diseases is the first step to successful treatment in any age group.

Considering, in the last decades, per the Brazilian Institute of Geography and Statistics, Census 2010, there has been an increase in the adolescent population representing 20% of the population, a total of 34,157,633 children (Brazil, 2013). Due to this population growth, multiple and complex needs of programs and public policies, health care is required because vulnerabilities are present in this age group. Also, per the Statute of Children and Adolescents, adolescence comprises the age group of 12 to 18 years old, and the Ministry of Health are all individuals aged 10 to 19 years (Brazil, 2012).

Adolescence is a stage of human development which is characterized by various transformations. Moreover, it is at this age that diseases may determine severe damage on the psychological, emotional, physical and social development of increased morbidity and mortality. The occurrence of eating disorders, bulimia, and anorexia, the prognosis is guarded. Among the severe pathologies detected in modernity that has been affecting the biopsychosocial development of the adolescent, especially females, Eating Disorders have been in evidence in the clinical and psychological field, particularly Anorexia Nervosa and Bulimia Nervosa, due to the complexity of causal factors, symptomatology, and diagnostic difficulties. The adolescent population has the highest prevalence of detected cases. McCabe and Ricciardelli (2003) point out that such an occurrence may be because it is precisely at this stage of life that the young person feels particularly pressured by the demands and impositions of society and is, therefore, vulnerable and insecure about the acceptance of his body, which can lead you to a process of distortion of your body image.

The phase of adolescence is a period characterized by the occurrence of major transformations of a bio psychophysiological nature, with which the adolescent needs to be able to cope. In this phase, the young person begins to build his identity and to recognize himself as a social subject. This task becomes even more arduous when faced with models of behaviors and behaviors pre-established by society, which then influences their choices and the way they view their body image McCabe and Ricciardelli (2003).

The distorted perception of one's own body image, coupled with the fact that the adolescent is very vulnerable to external influences, often ends up directly affecting the process of constructing his identity and fostering the emergence of eating disorders, because, to fit the standards of beauty imposed by the media, young people can adopt a destructive eating behavior, in the attempt to conquer the ideal body, as the realization of radical diets that can bring damage to their health, as reported by Fiates and Salles (2001). On the other hand, when reporting that Anorexia Nervosa brings "at first, dehydration and mal-nutrition. Although patients deny hunger, they present constant complaints due to fatigue, weakness, dizziness and blurred vision.

Moreover, to approximate the lean aesthetic pattern adopted by models and celebrities and thus feel socially accepted, some women tend to develop Eating Disorders such as Anorexia Nervosa and Bulimia Nervosa. What does not seem to happen to men, considering that they do not care so much about having an extremely thin body, just as young anorexics want, but they seek to construct, often in an obsessive

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