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Abstract: Premature birth has an impact on many Canadian women. Since prematurity is not restricted to a particular group, it is not easily identifiable. However, it is imperative to understand the factors associated with premature births because they are the leading cause of infant mortality in developed countries, and represent approximately three of every four deaths occurring during the perinatal period. Premature birth is also accompanied by multiple and interrelated risk factors requiring health care providers from a variety of disciplines. The review of the literature reveals that there exists little agreement on the effects of prematurity, especially extreme prematurity, on child development. However, researchers agree that all domains of development remain vulnerable following a premature birth. This paper will provide an overview of prematurity and its consequences, notably those associated with neurodevelopmental outcomes. The challenges regarding research in prematurity will be discussed as well as the need for interdisciplinary research in this complex field.

Keywords: Prematurity, Interdisciplinarity, Speech-language Pathology

Introduction

The human fetus develops within a complex maternal environment. The intrauterine and intra-amniotic compartments define the characteristics of the prenatal environment; these, in turn, are mainly determined by maternal variables (Lepley and Gogoi 2006). The respiratory and nutritional supports are therefore significantly influenced by metabolic, cardiovascular and maternal environmental factors (Kramer et al. 2000). Furthermore, the fetus has limited capacities that allow him to adapt to the stress of this environment (Kramer et al. 2000). Accordingly, the prenatal environment has a huge influence on fetal development and on its well-being. This influence lasts well beyond the gestational period and can have a profound impact on the short- and long-term monitoring of the fetus (Lepley and Gogoi 2006).

Approximately 350,000 babies are born each year in Canada (Canadian Health Information Institute 2009). Although most of these babies are born at term (37 weeks of pregnancy or later), it is imperative to understand the factors associated with premature births because they are the leading cause of infant mortality in developed countries and represent approximately three of every four deaths occurring during the prenatal period (about five months before and one week after birth) (Kramer et al. 2000). In addition, premature birth has an impact on many Canadian women, but is not restricted to a particular or easily identifiable group. It is estimated that in the second half of a pregnancy, 10 to 20% of patients are at risk of preterm delivery (Guy, Chantelot, and Sallé 2003). Finally, premature birth is also accompanied by multiple and interrelated risk factors that require several health care providers (Guy, Chantelot, and Sallé 2003).

In North America, the incidence of premature births has increased in the last decades. In Canada, it rose from around 6% in the early 1980s (Joseph et al. 1998) to 8% in recent years (Statistics Canada 2008). In 2006-2007, the rate of premature births in Ontario was 8.3%, with the Canadian average being 8.1% (Canadian Health Information Institute 2009).