Introduction

Health status at any age in the life span of an individual depends on an accumulation of life events and experiences, especially early life events. There is considerable evidence that good nutrition in early life has a positive effect on the development of the brain and cognitive performance. During 2 critical periods in development of the central nervous system (prenatal and postnatal) nutrition may affect fetal growth ***(Webb et al., 2001),*** developmental milestones ***(Richards et al., 2002)*** and physical growth of the child ***(Lauritzen et al., 2001)***.

Infancy is a critical period for brain development. Few studies have examined the extent to which infant weight gain is associated with later neurodevelopmental outcomes in healthy populations. The third trimester of pregnancy through ≥2 years post term is a critical period for brain development. During that time, the brain develops rapidly through the processes of neurogenesis, axonal and dendritic growth, synaptogenesis, cell death, synaptic pruning, Myelination and gliogenesis **(*Webb et al., 2001).***

These developmental processes build on each other over time so that a small disruption in any of the processes may have wide and long-lasting effects on brain structure and function (***Grantham-McGregor et al., 2007).***

Under nutrition during fetal growth may cause low birth weight, which may result in poorer performance on tests of cognitive function in later life ***(Mortensen et al., 2002).***

Postnatal nutrition, in particular breastfeeding, may manage not only the development of the brain, but also affect the child's developmental milestones ***(Elwood et al., 2005)***.

For example, one study showed that children who were breastfed talked and walked earlier than those who were never breastfed**.** Children who were breastfed score higher on cognitive performance than those who never breast fed, and this has been found to be true between ages 8 and 15 years ***(Jain et al., 2002).***

It is important to know whether slower infant weight gain is associated with poorer cognition in healthy populations of infants, because rapid weight gain may carry some harm, including an increase in the risk of obesity and related disorders later in life ***(Belfort et al., 2007).***

Breast milk is species-specific. It is similar to other living tissues, such as blood, and is able to strengthen immunity, transport nutrients, affect biochemical systems and destroy pathogens ***(Riordan, 2005).***

Breast milk provides optimal nutrition for a growing infant, with compositional changes that are adapted to the changing needs of the infant. Human milk contains adequate minerals and nutrients for the first six months of life ***(WHO, 2010).***

There is large relationship between breastfeeding &cognitive function in children. This cognitive abilitiy is assessed by IQ tests ***(*Jedrychowski *et al., 2011).***

Breastfeeding is important for brain development and intelligence as it contains high concentration of long chain polyunsaturated fatty acids as Docosahexaenoic Acid (D.H.A) and Arachidonic Acid (A.A). Also it contains cholesterol, amino acids as Taurine and also lactose which broken in the body to glucose and galactose. All are important nutrients for brain and central system tissue ***(Kaufman, 2002 and Myer, 2006).***

The psychological advantages of breastfeeding for both mothers and infant are well recognized. The mother who is involved in nursing of her baby,

resulting both in a feeling of being essential while the infant is provided with a close and comfortable physical relationship with the mother ***(Heird, 2004).***

Breastfeeding also may increase the interaction between mother and child, which could improve children's cognitive development ***(Highfield, 2008).***

There is a need for health care system interventions, family interventions and public health education campaigns to promote breastfeeding ***(Corbett et al., 2007).***