Chronic Malnutrition Diseases

The discussion in this assignment will be focused on chronic malnutrition diseases and the effect it has on women's pregnancy and children. The nutrition policy data and statistics will be compared between a less economically developed country (LED) in Asia, Nepal, and a more economically developed country (MED) in Europe, United Kingdom (UK). Concluding and evaluating on what is being done to prevent the chronic diseases and malnutrition.

Malnutrition is mostly known for undernutrition (underweight, wasting, stunting), insufficient vitamins or minerals around the world (WHO, 2020). However, malnutrition can also be an indication of overweight, obesity and these forms can lead to diet-related non-communicable diseases (WHO, 2020). Currently, complexities of global health-specifically chronic or non-communicable diseases and infections caused by over- and undernutrition has been increasing (Raiten et al., 2015). Maintaining satisfactory nutritional status is essential for healthy ageing globally. It supports an individual's physical and emotional well-being with self-care capacity (Jung et al., 2017). Small amounts of nutrients, vitamins and minerals, are needed for the body to work accordingly and stay healthy (NHS, 2020). The nutrients needed daily can be achieved by having a varied and balanced diet, though some individuals may require taking extra vitamins and minerals supplements (NHS, 2020), for instance people who are low in Vitamin D.

Sufficient nutrition during pregnancy is vital to establish excellent birth results, maternal health and healthy development of the offspring (Symington et al., 2018). The window of "first 1,000 days" is considered critical for the first 6 months from conception to reduce or prevent poor birth outcomes, for instance low birthweight (Kavle & Landry, 2018). Lee et al., 2013, performed an investigation where data from 62 studies in low- and middle-income countries in Africa, Asia, Latin America and the Caribbean were analysed and found insufficient micronutrient intakes and small dietary diversity among pregnant women (Lee et al., 2013). This suggests that low- and middle-income countries are more likely to have pregnant women who lack in nutrition.

Unfortunately, most preventions for malnutrition focuses more on infants and child health and not on maternal nutrition (Kavle & Landry, 2018). This suggests that the prevention of child malnutrition is to provide sufficient nutrition to pregnant women within the "first 1000 days". Not only is child malnutrition one of the major contributors to child mortality, but it also determines socioeconomic status in adult life (Kien et al., 2016). To further expand, nutrition level taken as a child will have an impact as an adult life like a dominos effect and this can be explained by the epidemiological triangle. This will be explained later in more detail when comparing the two countries mentioned in the introduction.

Approximately 820 million people were under malnourished in 2018, which increased from 2017 by 9 million more (WHO, 2019). As a result, this undermines the objectives of achieving the Sustainable Development Goal of Zero Hunger by 2030, as it was also stated by the annual "The State of Food Security and Nutrition in the World" report released in 2019 (WHO, 2019). At the same time, the World Health Organisation (WHO), 2016, stated that there are about 2 billion overweight adults, 650 million out of those are obese. WHO also stated in 2019, 144 million children under the age of 5 years were stunted, 47 million wasted and 38 million overweight. These malnutrition factors can lead to chronic malnutrition defects. Lacking in

nutrients will affect cognitive development during the first two years of a child's life, low height, low weight according to height and age etc. Children who are undernourished are at higher risk of developing diseases such as obesity, diabetes and cardiovascular disease (CVD) in their adulthood (UNICEF Canada, 2020). Lack of appropriate care in early childhood can result in repeated infections and multiple diseases which can either cause slow development or death in some cases (De & Chattopadhyay, 2019). The nutritional status and neurodevelopment of these undernourished children can be affected by the demographic and socio-economic factors (De & Chattopadhyay, 2019).

The data files shown in the World Bank Group shows UK is a high-income country. The gross domestic product (GDP) in the UK showed in 2019 the GDP was 2.827 trillion (US dollars). Based on the studies reviewed above a high-income country should have very few childhood malnutrition, however, 1 in 3 children in the UK are overweight or obese when they are at an age to leave school (UNICEF UK, 2019). UNICEF UK, 2019, also mentioned that children in poor areas are twice as likely to be obese. The reason for this consequence is the lack of access to healthier food. It was reported that unhealthy diet and feeding behaviour or practices start from the earliest days of a child's life (Liam Sollis, Head of Policy at UNICEF UK, stated in UNICEF UK, 2019). Sollis also stated that breastfeeding is very essential for a healthier lifestyle for children, only 42 per cent of children under the age of six months are breastfed and a high number of children are fed infant formula. It is stated that exclusive breast feeding at six months (which is recommended by WHO) in the UK only remained at approximately 1 per cent. As of now, these low statistics prove that women in the UK are not encouraged enough to breastfeed their child when they can. If these matters were prioritised then the increase in breastfeeding rates would show a positive impact on child health (UNICEF UK, 2018). With instances like common childhood illnesses such as chest, ear and gut infections would be reduced and would save NHS costs of up to £50 million per year (UNICEF UK, 2018).

With an increasing number of 28 million and more adults and children in the UK being overweight or obese, it fuels diet-related health conditions with rapidly increasing number of non-communicable diseases like Type 2 diabetes (T2DM), cardiovascular disease (CVD) and specific forms of cancer (Food foundation, 2017). Currently, in England alone the NHS spends £16 billion annually, with the majority being spent on T2DM (Simon Stevens, Chief Executive of NHS England quoted in Hughes, 2016). It is predicted that by 2050, the NHS costs regarding the issue of overweight and obesity will reach £9.7 billion, with more costs to the public community estimated to reach £49.9 billion annually (Health Matters GOV, 2017).

Regarding a healthy balanced diet in the UK, the Public Health of England (PHE) has launched the new Eatwell Guide on 17th March 2016 from the old Eatwell Plate. They have revised the proportions of the food groups and shows more fruits, vegetables and starchy carbohydrates with reduced sugary foods and removal of soft drinks (PHE, 2016a). Government dietary recommendations for adults and children subdivided by male and female provided by the government and the food labelling also helps guide the population into healthy eating (PHE, 2016b, NHS Surrey and Borders Partnership, 2020). There is also a 5 A Day campaign which was based on the advice from WHO, recommending to eat a minimum of 400g of fruits and vegetables daily to reduce the risk of developing health conditions, like CVD, stroke and some types of cancer (NHS, 2018). According to the public health guideline, it also recommends that adults in the UK should exercise for a minimum of 150 minutes with moderate intensity weekly (Health Matters PHE, 2016). However, as suggested by Kavle and Landry, 2018, there should be more management of healthier process for pregnant women and their babies instead of

management for adults' health to be able to reduce obesity or malnutrition in the first place or the earlier stages of a child's life.

Very descriptive and detailed reports were collected by Basil Lee, 2008, discussing about an ethnic and cultural difference in maternity care. A report made by Sheila Kitzinger (Social anthropologist), 2004, stood out the most as the topic was touched upon a cross-cultural view of birth. Kitzinger mentions how the 'West', which she refers to the UK, has lost the touch of care in maternity. That women are covered by machines and wires when giving birth and in America some hospitals even practiced removing the new-born child from the mother's arms unable to bond with the baby (Kitzinger, 2004). The cold report also states midwives are meant to be someone who nurtures and cares for vulnerable pregnant women, however, now the use of technology is being demonstrated, like obstetric forceps to administer forceful suction on the baby's head (Kitzinger, 2004). National Maternity Review (NMR) shows a section of feedback from women who gave birth. It mentions the lack of privacy and how the mothers feel like they are not in control of making choices and rather the consultants and the midwives are (NMR NHS, 2016). It is important to take this new culture in western countries into consideration, because it shows how less nurtured pregnant women are. With the loss of care during maternity it provides evidence why the UK has very low percentage of children who are breastfed and high numbers of infants who are given instant formula.

In relation to the cultural matter of this topic, this leads to the discussion of maternal care in Nepal. Nepal is a small, LED country in Asia with their GDP of only 30.641 billion (US dollars) per year (World Bank, 2019). Before discussing about Nepal's malnutrition issues, statistics from Nepal Demographic Health Survey 2016 showed that 65 per cent of children under six months were breastfed (Dharel et al., 2020). This is higher than the percentage of breastfeeding infants up to six months in the UK. Usually, women in Nepal have a resting period after delivery, and the resting duration can last up to a month (Sharma et al., 2016). In this period the postnatal mother is sent to her parent's home and can stay there if she wishes. (Sharma et al., 2016). During this time, the mother and the baby are given massages to help relax their muscles, in hopes of making the baby grow with strong and healthy joints (Sharma et al., 2016). This extreme post-natal care of the mother and the new-born baby suggests the reason for the high number of breastfeeding in Nepal, as their maternity culture focuses more on the health of not only the mother but the baby also. This aspect of the culture is practiced in most parts of Asia, including India, China, Bangladesh etc. This topic was discussed by Rachel Heathcock, 2016, that in India post-natal mothers are treated like a princess and in China, the mother's mother-in-law will help look after their health while they recover from the delivery.

On the contrary, malnutrition in childhood and pregnancy in Nepal is one of the major contributions to mortality. Approximately 1 million children under the age of five years (which is 36 per cent) are affected from chronic malnutrition diseases like low height for age or stunting (USAID, 2018). 10 per cent are affected from acute malnutrition diseases like low weight for height and wasting (USAID, 2018). 53 per cent of children under the age of five years, 46 per cent of pregnant women and 41% of women of reproductive age are suffering from anaemia (UNICEF Nepal, 2018). UNICEF Nepal accepts the challenge of reducing malnutrition in Nepal and has agreed that the first 1,000 days from the beginning of the pregnancy of a woman is very important as it is a convenient time frame for preventing undernutrition and its consequential chronic diseases. Through evidence-based interventions, UNICEF supports the Government of Nepal with their targets to encourage breastfeeding, suitable foods for babies for over six months, and to supply micronutrient supplements for women and children to manage

their deficiencies (UNICEF Nepal, 2018). With an increase in the political commitment and policies in Nepal to help prevent malnutrition, the Nepal Health Sector II (NHSP II) of the Ministry of Health and Population (MOHP) have implemented on interventions on nutrition through the health sector from 2010-2015, and the Multi-Sectoral Nutrition Plan (MSNP) of the National Planning Commission leads and coordinates interventions related to nutrition through multiple sectors from 2013-2017 (Chaparro et al., 2014). There are also programs that are guided by the female community health volunteers (FCHVs) who provide public health interventions like maternal care; child health; Vitamin A etc. (Chaparro et al., 2014).

Although 66 per cent of the population in Nepal are employed by the agricultural sector, it battles to produce enough supply of food for the whole country (USAID, 2018). This poor growth of agricultural products in Nepal results in depressed rural economies, rapid spread hunger and increase of malnutrition issues (USAID, 2018). Gender and caste system fail to provide adequate nutrition to women and children in Nepal as there are gender bias and cultural hierarchy issues within families (Madjdian & Bras, 2016). Studies showed that the adult males in the families were the decision-makers of consuming food they preferred the most, solely because they are the breadwinners of the family and have control over food allocation (Madjdian & Bras, 2016). This resulted in women or children in the family less likely to meet their required nutrients as compared to men. Demographic and socioeconomic factors like the caste system is also a factor for malnutrition is some parts of Nepal. The caste called the Dalits (formerly referred to as “untouchables”) belong to the lowest rank in the Hindu caste system in Nepal and India and were discriminated from education or employment opportunities (Pandey & Fusaro, 2020). These issues caused them to fall into poverty and therefore not afford or have access to nutritional diet.

The differences between the nutritional issues of the UK and Nepal is very vast. Cultural, socioeconomic and financial differences have provided both countries with opposite forms of malnutrition and consequences. When integrating the epidemiological triangle in Nepal’s situation it shows the basic process of poverty in malnutrition. For example, for Nepal the environment would be the poor economic status, the demographic and socioeconomic factors, which De & Chattopadhyay, 2019, also agreed would be a factor for malnutrition; like the discriminating Hindu caste system, cultural factors like the gender bias where men have more power over women and even the degree of urbanization, which is not a lot as mentioned earlier 66 per cent of the population have agricultural sector like farms in rural areas. The vectors would be food that provide under nutritional diet to pregnant women and children, for instance an unbalanced diet of only rice and no meat or vegetables. The food insecurity in the country will also affect the population as there is a shortage of food or some people cannot afford nutritious food daily. The hosts in this overall situation would be the vulnerable pregnant women and children. Nepal is also a low-income country and as mentioned by Lee et al., 2013, these countries are most likely to increase malnutrition and chronic diseases like low height for age. UK being a MED country, the public can afford to buy rich nutritious food however, with unhealthier, ready made meals like takeaways being cheaper it causes the development of obesity, T2DM and later complications of CVD. Furthermore, the cultural differences of maternal care also add effect on nutrition in pregnant women and children in the UK as some mothers are not nurtured and taken care of as much as women in Nepal. This causes undernourishment in the first 1,000 days of the child’s early life and makes them more vulnerable into developing chronic diseases like obesity and T2DM in the UK. However, there is a significant similarity with the management of two countries, and it is education on nutrition and healthy eating. The UK and Nepal have both established that by educating the public in areas of poverty in Nepal or

poor areas in the UK will help prevent malnutrition and both countries also believe that the first 1,000 days of the child’s early life determines their health outcome.

Although these malnutrition issues are present in both countries there are variety of interventions being implemented to prevent malnutrition. Intervention programs and nutritional policies like the 5 A Day campaign in the UK and recommended nutrition guideline provided by the UK government, and the NHSP II of the MOHP providing intervention schemes to prevent malnutrition in Nepal are being pushed to become a priority with political and governmental commitments and organisations like UNICEF, United Nations (UN) and WHO being involved. Therefore, even with the differences in both countries, the issues of malnutrition are still being tackled together globally.