



Casualties of the Danish Malnutrition Period

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Abstract

From 1999 to 2007 the number of people who died from malnutrition in Denmark rose suddenly, in some parts of the country up to 8 times. Inspired by the Dutch famine studies we examine that the death rates from diseases causing malnutrition. We find a parallel to the Dutch famine studies in that it seems that patients suffering from schizophrenia, stroke and Alzheimer's disease also in excess during this period.

Abbreviations:

DMP : The Danish Malnutrition Period

AD : Alzheimer's Disease

Keywords: Deaths; Denmark; Elderly; Malnutrition Period

Introduction

Europe is usually considered to be an affluent and healthy part of the world, but over the last 80 years both Holland and Denmark have experienced a period of malnutrition, namely the Dutch famine and the Danish malnutrition period respectively.

The Dutch famine 1944-1945

During the last part of the Second World war, the occupied parts of Holland were starved by the Germans in retaliation for the failed Operation Market Garden. The period lasted from October 1944 to May 1945. The effects of the starvation were not only felt by the people who were alive at this but also by children not yet born. Studies on people who had been exposed to prenatal famine

during this period show that they have an increased risk of developing schizophrenia, diabetes, cold, breast cancer and Alzheimer's Disease(AD) and have an altogether higher all-cause mortality [1-3].

The Danish malnutrition period (DMP) 1999-2007

During the late 1990s and the early years of the new millennium, Danish hospitals were heavily criticized for the quality of the food they were serving to patients and [4] Danish doctors were found to be largely unaware of the importance of nutrition in connection with diseases [5,6].

In 1999 something strange happened in Denmark as the number of people who died from malnutrition rose by some part of the country up to eight times almost from one day to the next. The period has been named the Danish malnutrition period (DMP). All in all, a total of 340 extra lives were lost as a direct cause of malnutrition (Figure 1 and 2) [7]. What exactly caused the DMP is not yet known, but it seems to correlate with Danish government's public health program. The number of deaths from malnutrition. Women -Total for Denmark (Figure 1).

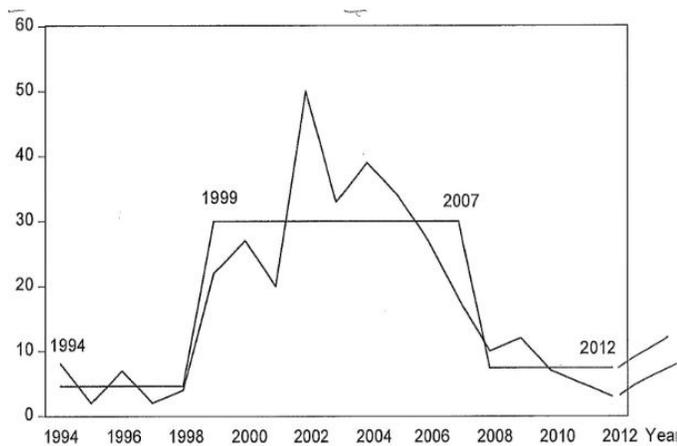


Figure 1: Around 25 women more than expected died per year from malnutrition during DMP in 1994-2012.

The number of deaths from malnutrition. Men -Total for Denmark (Figure 2).

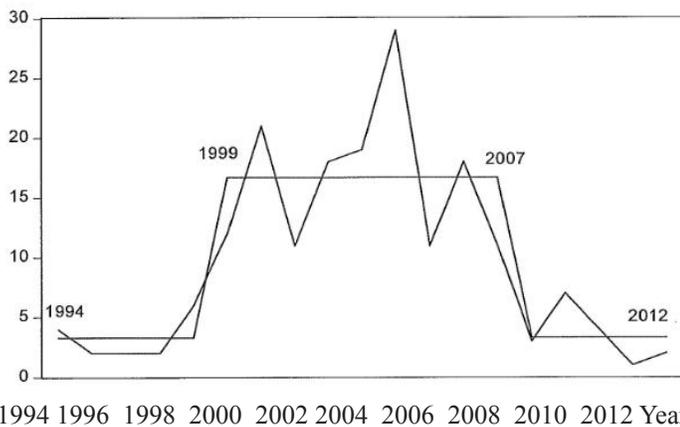


Figure 2: Around 13 men more than expected died per year from malnutrition during DMP of 1994-2012.

The number of people affected by the malnutrition period however-is much larger. Inspired by the Dutch famine studies, investigations were made into the death rate from other diseases that may lead to malnutrition. The studies found an increase parallel to the death rates from malnutrition during this period from 1999 to 2007 [8-10]. Malnutrition, unlike for example an acute myocardial infarct, is an unspecified diagnosis. The people diagnosed with malnutrition as the cause of death may actually have died as a result of other diseases such as AD, stroke and schizophrenia. as well as many others that have not yet been proven to be worsened by malnutrition. However, when we examine the death rates from AD, schizophrenia/and stroke we find that malnutrition drives up the number of deaths in other diagnose groups. Adding the numbers up, we found more than 1000 people died directly or indirectly as a result of DMP and this may just be the tip of the

iceberg [11]. It seems that the DMP also affected diabetes patients and people suffering from chronic alcoholism.

Results and Discussion

The beginning of the end of the DMP came into 2003 when the Danish government decided to launch a diet policy for the elderly in Denmark. In 2004 and 2005 a grant of 5 million DKK was distributed in 2006 the policy became permanent. A diet secretary was appointed in 2005 in the Health and Care administration and in 2006 diet consultants were hired in all local areas of Denmark. Therefore, Danish doctors became more aware of the importance of nutrition [12].

We believe that this along with other initiatives ended the DMP. Malnutrition is an unspecific diagnosis, and there may be other explanations behind the rapid rise in the number of deaths from malnutrition than a poor nutritional state. However, this seems unlikely. Studies made during this period shows that doctors were not very aware of the seriousness of malnutrition. The deaths from malnutrition were distributed, evenly across the country, and diseases known to worsen as a result of malnutrition were showing increased death rates.

Conclusion

From 1999 to 2007 the number of people who died from malnutrition in Denmark rose dramatically. During the Dutch famine people died directly from the malnutrition, but the effect of malnutrition was also felt by future generations. The DMP not only cause an increase in the number of people who died from malnutrition; in fact, it seems to be only the tip of the iceberg, as many diseases lead to malnutrition. The total number of people effected by malnutrition is many times higher than the number of people who died directly from the condition.

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