Jailynn Britt Gwynn Park High School Brandywine, Maryland **Poland, Factor 10: Dietary Diseases** 

## Poland and its Cardiovascular Crisis

Poland is a European country on the Baltic Sea in central Europe, east of Germany. Poland has an area of 120,726 square miles extending 428 miles East and 403 miles North. It is about the size of New Mexico. A plain country, with few mountains along the southern border, it has a temperate climate with cold severe winters with frequent precipitation. Their summers are mild in temperature with thunderstorms and rain as a common part of their week.

Poland families have an average of 3 people per household (OECD). Parents usually marry younger than 20 years old. Family is a very important part of Polish culture. Religion is also an important part. 95% of Poland people are Roman Catholic and the other 5% are Eastern Orthodox, Protestant and or another Christian denomination. Judaism and Islam are the largest non-Christian religions (Index Mundi, 2017).

Education in Poland is important, but not as important as mannerisms in children. Parents and family members teach children to be respectful and polite. Kindergarten in Poland is called "zero form". Zero form is intended for children aged 3 to 5 years old, and serves to provide care and teach educational, social and mental skills to children while parents are at work. Elementary school is mandatory for children at age 5.Gymnasiums specializing in foreign languages or sports often organize their own additional language skills or sporting abilities examinations for the students. Lastly, there are secondary schools. Secondary schools in Poland are defined as the schools that a student may attend after graduating from gymnasium. There are three options. You can do a three-year high school ending with a school-leaving exam; a four-year technical program or vocational school and at the end earning a certificate and having to do a school-leaving exam; or a three-year vocational school earning them a diploma confirming they are qualified in what they studied (Migrant Info.pl).

The barriers to employment with a living wage is not much of an issue for most adults. Youth make up the largest segment of the unemployed. Many of the youth are unemployed because they lack certain required skills sets for most permanent jobs.

Often when youth find jobs they are often hired under temporary contract, some of which pay little and offer no stability or social security. The World Bank states 27% (World Bank) of youth those employed are on temporary contracts. Even still with the high unemployment rate in youths, as a whole, Poland does not face a high percentage of lot of unemployment. In 2013, their unemployment rate was 17% and it has been is still steadily decreasing since 2005 (The World Bank, 2017).

In total, the unemployment rate is 8.5% (Every Country.com). Those unemployed are either too sick to work or they are helping their families on their farmlands. Many of those that are employed have rural jobs.

The average Polish diet consists of of salads, stews, and meat. Dinner is usually accompanied with meat, mostly pork. Bread is always enjoyed at dinner. Vegetables eaten with meals are grown locally. The most common vegetables consist of carrots, beets, cabbage, beans, and peas. Polish people also love desserts.

Frequent deserts might be cakes, rice cakes, or sponge cakes. Tea and coffee are primary drinks. Usually, tea is taken after each meal. Milk is also consumed from their cows or goats. It is common for a family to use their milk to make cheese, butter, sour cream or sour milk.

The typical farm size in Poland is about 20 acres. Since farms are small in size, it is common for them to be diversified with both plants and animals. Typically farms raise dairy, pigs, and poultry. It would be common to find horses and cattle as well. People normally do not raise sheep. Crop diversification is a normal agricultural practice, which requires planting different crops for marketing purposes, maintaining permanent grasslands, which is also known as greening. Greening helps filter pollutants and dust from the air, provide shade and lower temperatures in urban areas, and reduce erosion of soil into our waterways. Lastly, they need to conserve at least 5% of the land. For the urban area, many people work in education, manufacturing, construction, or transportation.

The access to food and their food security is good. There is a constant presence of food safety net programs which helps low-income families. According to the June 2016 Global Food Security Index study, Poland was scored 100% for its presence in food safety net programs. In short, Poland does well in regards to ensuring its people have access to food. Urban food production does occur but it is at a minimal amount. People may have small gardens on their roofs or a plant here and there on the balcony to supplement their diets

Barriers for improving agricultural productivity are lack of income, intensive labor requirements, and poor living conditions in regards to education and lack of healthcare. Often people in villages or small towns are poor due to a lack of employment opportunities in the nearby setting. This causes money to become scarce and is further impacted when families are too large to support themselves. Even though there is an abundance of people farming, there is still a persistent need for more produce and more people involved in production agriculture. Farming is not an easy job and requires labor from the people owning the farm and extra hands. These are challenges faced by people all over the world not just in Poland.

The barriers to accessing food markets and proper nutrition include high prices on certain foods such as fruits that are imported. Poland grows rye, triticale, mixed grains, barley, and maize. Berries such as strawberries, raspberries, and currants as well as outdoor vegetables like onions, cabbage, and cauliflower. Fruits like apples, pineapples, and oranges must be imported. Barrier for healthy eating include a lack of awareness of the fruits and healthy foods. Often fresh produce has a short expiration date. This may cause people to choose other options since they do not want food to go to waste and more importantly do not want to waste money on an item they are unable to eat. To make things more difficult there is a lack of fresh fruits and vegetables in certain region which stops people from getting healthier foods. Since people are not wealthy, starch is the most inexpensive and easy item to purchase. Unfortunately, people eat a higher percentage of starches that have a reduced quality of nutrition.

Health care in Poland is delivered through a publicly funded health care system, which is free for all the citizens of Poland if they have health insurance paid for by their employer, or are the spouse or child of someone who has insurance does. The Social Insurance Institution (ZUS) is mainly in charge of health insurance for people who are not employed people and do not have insured provided by their employer. ZUS Social insurance provides income security such as monetary benefits for old age, disability, sickness and maternity, and for accidents at the workplace and occupational diseases. The Ministry of Health is also responsible for national health policy. This policy is to help by financing long-term public health programs and select highly specialized medical services, major capital investments and medical science and education.

Dietary diseases affect household income and food availability. Two-thirds of the overall diseases in Europe are Cardiovascular Disease (CVD) and cancer. Conservative estimates suggest that about onethird of CVD is related to poor nutrition. Deficiencies of foods is the main cause. Vitamins like A and other antioxidant vitamins and non-nutrient components of fruits and vegetables would lend to a healthy diet and less deficiencies. That means people aren't buying fruits and veggies with vitamin A. This could be rectified if sweet potatoes, carrots, dark leafy greens, winter squashes, lettuce, dried apricots, cantaloupe, bell peppers, fish, liver, and tropical fruits were added to their diet Tomatoes and apples are the highest selling fruits in Poland.Tomato production in the EU-28 was worth EUR 7 billion and tomatoes accounted for 44.0 % and 43.8 % of production respectively (Eurostat). Apples were valued at EUR 4 billion. As we read earlier, people may not be buying fruits and veggies because they're expensive. Apples and fruit, on the other hand, had a more up and down trend so they're cheaper and more available. Low socioeconomic status, as indicated by low household income, could limit access to adequate diets, particularly for older children. People from low-income households were more likely to have inadequate intakes of macro and micro-nutrients such as protein, folate, calcium, iron, vitamin A and B vitamins, low-quality foods that are high in cholesterol, saturated fat, added sugar and sodium and inadequate fruits and vegetables. Generally, low-income status is related to less diverse diets and lack of adherence to foodbased dietary guidelines. It has also been reported that living in impoverished condition during childhood could adversely influence adult health, perhaps through its effect on child health and nutrition. Less money you have, less able to buy more fruits and vegetables. With all these people sick, and unhealthy, they can't do much so people have to pay for medicines, and have care providers which cost more money.

Average household health is starch-based foods. Families consume a lot of bread and potatoes and purchasing foods of reduced quality, quantity, and price experience lower average levels of subjective physical health than other families.there are a lot of cardiovascular diseases, cancers. Studies were done in 2014 showing 42% of men have CVD and 51% of women are fighting CVD. More disturbing is that 23% of men and 18% of women have cancer of some kind. In 2012, 2,885 people were hospitalized for CVD, and 811 for heart diseases (European Communities and World Health Organization)

Some other major issues in Poland right now are federal debt, Russia's foreign policy, air pollution and water pollution. Federal debt could affect dietary diseases because it could cause the price of the fruits and vegetables to increase making it even harder for people to buy the right foods. People will get sicker and more diseases could become more prominent. Russia's foreign policy could affect dietary diseases in Poland because it's worsening the economic situation and a domestic political destabilization would cause the economy to change and become worse, making prices go up and making people more poor and sicker and eat even worse.

Air pollution could affect dietary disease because the burning of coal and other fossil fuels gives rise to various chemical pollutants such as sulfur dioxide, nitrogen oxides such as nitrite, nitrate, etc., and ozone reduction as well as a variety of other hydrocarbons added to the air. Ozone and peroxyacetyl nitrate produced in these reactions can injure plants depending on concentration and duration of exposure. Ozone causes up to 90% of the air pollution injury to vegetation(Brust,1). Common vegetables grown in such as tomato, watermelon, squash, potato, carrots, sweet corn, green peas, turnips, grapes, peaches, and strawberries are more susceptible to air pollution damage. These are the most common crops of Poland's agriculture. Due to pollution, the nutritional quality of vegetables decreases. Sickness can occur from this lack of healthy agricultural products available for consumers

Families who consume a lot of bread and potatoes lack health compared to other families. This issue could be addressed firstly by having the whole family get their health checked currently. If they see where they are, that's just a beginning. Once they figure out their issues, such as heart problems or obesity, they can adjust from there. If healthy food was cheaper, people would make the better choice especially if it is for the children. Parents always want the best for children and their health. They just cannot afford the expensive, luxury, organic food. Education is also key because if the person does not know what's good and what's not, it does not matter how cheap the healthy food is.

As a solution for the poor food epidemic in Poland community members and government have the power to assist with the Food Empowerment Project. What is the the Food Empowerment Project you ask? Well the food empowerment project informs people about diseases that come with eating food choices. It teaches member of the community the difference between healthy items and unhealthy items. Which will allows member the choice to choose items that are nutritionally better for you. It also explains issues on people's access to health, educates the community of proper animal husbandry skills and the basics of how to raise chickens f as layers and dairy cows for milk production. This would be coupled with educational discussions on environmental and global issues, human labor and food choices. How to scale up this nonprofit business is by sharing more information about it on social media and making it more known. When I was doing my research, I did not see the Food Empowerment Project as common option for people in Poland. This project has the possibility of making a big difference if it became mainstream. A community could host an event to educate and inform the people. Sometimes it is best to start with the younger generation to help push the older generation to changes their views and practices. If education is paired with fun activities this could be successful. The federal government could support this initiative with fund ing as well as looking for corporate sponsorship to partner this project. Communication avenues would be very important in getting the idea out to the public. Possible use of a main websites would allow families the information to make informed choices and become more involved. Social media could also be used as a tool to educate the community about events that are to occur.

Through my research one organization is spreading information on the issues. The name of the organization is European Society of Cardiology. They have a country of the month where they spotlight a European country and their cardio issue. They speak about prevention methods, rehabilitation, risk factors and etc. Other than that, there aren't other organizations trying to fight this issue in Poland. In the United States, they have the American Heart Association which talks about risks, support, research that has gone into this organization, and updated health articles. This organization also works closely with doctors to help keep people healthy and to have a good diet. There is also the Heart Foundation and its really specifically set for heart disease. They provide events, articles, research papers, etc. There are many more programs catered to cardiovascular issues. Few of these organizations though help worldwide, specifically small countries like Poland.

There are so many small ways we can help get people better foods and on better diets to combat cardiovascular problems in Poland. We just need people to work together, understand why and figure out the issues at hand. There are a few ideas already, but getting more people involved, people who actually live in Poland and know the lifestyle can really help. We just need to spread the word and give it a jump start. These solutions (education and money) should be funded by the government. The government should want healthy people and a healthy country. If there is a healthy country then the government would have fewer issues involving deaths and diseases.

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