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(BMHP 5003_LON)

ASSESSMENT 1

Introduction to physiology

Introduction to physiology

OLUWASEUN AKRAN (1908389)

POSTER PRESENTATION TERM 2

PUBLIC HEALTH ISSUES DIABETES

Public Health Issue: Diabetes: (Type 1&2)



Physiology

Indicates normal condition the working of the human body based on.

Risk factors of diabetes (1&2)

Overweight, family history, high blood pressure, stroke

A Case study Patient

Patient A because she is 48 years old her risk of developing diabetes is higher. She smokes 10-19 cigarettes everyday which is bad for her health. She needs to quit smoking because it can lead to heart attack, she has a blood pressure reading of 180/90 which means that her blood pressure is more than normal making her heart to harder to circulate blood throughout her body working more than normal. Instead of 120/80 . She is 165cm tall. She does not have a heart attack but her father does over the age of above 60 indicating that she has a life history of diabetes and her sister has high cholesterol. Her body mass index (BMI) OF 36 indicates that she is overweight. She doesn't exercise because she doesn't have time .But she eats meats regular chips and fries, which means her eating habits are bad because she doesn't consume healthy diet. She also consumes 3-6 units of alcohol a day which is harmful to her health; she should abstain from alcohol. Therefore, she is suffering from diabetes. WHO (2016)

Recommendation

The following recommendations are highlighted for patient A

- Patients A should continue to exercise on a regular basis, such as walking for 30 minutes every day.
- She must practice eating a nutritious diet consisting of fruit and vegetable every day.
- She needs to stop smoking and finally should consult her

Diabetes is a public health disease where the pancreas cannot produce sufficient insulin to the body cells. House of Parliament (2012) indicates that diabetes is as a result of the pancreas inability to release enough insulin to the cells. The insufficient insulin in human body is a serious illness and may result to the liver with plenty glucose to causes unclear vision, limb amputation, kidney failure as well as heart disease.

Types of Diabetes

Type 1 and 2 diabetes Type 1 diabetes life expectancy is 20 years, compared to people having Type 2 diabetes (Public Health England, 2014)

Causes of Diabetes

Poverty, unemployment, high social inequality, and lack of insulin.

Intervention

- Promoting community physical activity.
- Healthy dietary change program to induce a 7 percent weight loss.
- Health-check programs.

Introducing food taxes as a prevention measure for obesity. And diabetes.

- Design building with stair case .PHE (2014)

References

House of Parliament (2012) Preventing Diabetes, Post Note, No. 415
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Public Health Issue :Diabetes

Diabetes is viewed as a public health issue of a continuous disease because people affected with diabetes their life expectancy is reduced. Public Health England (2014) indicate that diabetes is recognized as a lifelong sickness recognized as public health issue where the pancreas is unable to produce insulin to feed the body cells, hence, it reduces the life expectancy of affected persons. For example, People with Type 1 diabetes have a life expectancy of 20 years, whereas people with Type 2 diabetes have a life expectancy of 10 years. This means that diabetics have a shorter life expectancy.

Type 1 Diabetes

Type 1 diabetes is a disease where insulin release from the pancreas is damaged which makes the affected person have a lifelong treatment. According to Hex et al. (2012) Type 1 diabetes is a result of damaged insulin from the pancreas, therefore, causes sickness and requires lifelong treatment. In addition, World Health Organization (2008) and Diabetes UK (2014) argue that Type 1 diabetes is acknowledged as autoimmune disease which has affected about 10 to 15 percent of the adult population. This shows that a sizeable proportion of people is diagnosed with the Type 1 diabetes and requires lifelong treatment.

Type 2 Diabetes

Type 2 diabetes is a lifelong public health issue where the body fails to release enough insulin to the other parts of the body cells, hence, the Type 2 diabetes is drawn from genes, lifestyle including environmental factors. Diabetes UK (2013, 2014) indicates that the Type 2 diabetes is another continuous lifelong disease where the pancreas is unable to produce insulin to cover the other parts of the human cells. Similarly, World Health Organization (2008) contend that Type 2 diabetes is caused by the unavailability of insulin from the pancreas to the whole part of the human body, therefore, Type 2 diabetes occurs which may allow the affected person or individual to suffer from fatigue, too much of glucose in the urine. This implies that Type 2 diabetes and Type 1 diabetes are similar in their causes, this is because both diabetes are caused by the lack or insufficient insulin from the pancreas to feed the other parts of the body, therefore, in the event of this, the diagnosed person when untreated is likely to suffer from tiredness and too much of glucose may be seen in the urine.

Undoubtedly, Type 2 diabetes is distinguished by a number of symptoms, including excessive nighttime urination, increased thirst, extreme fatigue, the possibility of genital itching, and wounds and cuts that take a long time to heal., indistinct vision and losing weight Diabetes UK (2014) argue that various symptoms are associated with Type 2 diabetes which can allow an individual to know that there is a chance of Type 2 diabetes and some of these symptoms are passing too much urine at night, rise in thirst, extreme fatigue, chances of genital itching, wounds and cuts which stays for a long time to heal, indistinct vision and losing weight. Individuals experiencing any of these symptoms may want to seek medical help to correct and chance of being diagnosed with Type 2 diabetes.

Diabetes in UK

In the United Kingdom (UK), research evidence showed that diabetes is regarded as a serious public health issue which has become a topical issue of discourse among public health practitioners and also the government concerning the direct and indirect cost element associated with it. According to Hex et al. (2012), in the United Kingdom, diabetes is a disease which has been diagnosed in larger proportion of the adult population and it as attracted substantial direct cost and indirect cost of treating the disease. For example, Diabetes UK (2014) argues that in the United Kingdom, 1 out of 17 adults are diagnosed or undiagnosed with diabetes. In addition, Diabetes UK (2014) reported that in 2013 in the United Kingdom an approximate 3.2 million individuals were diagnosed with diabetes. Indeed, it is also reported that this figure of diagnosed diabetes people may likely rise by 2025. Also, in 2013, it is reported that people undiagnosed with diabetes accounted for 630,000 (Diabetes UK, 2014). This implies that in the United Kingdom, there have been a sizeable proportion of people suffering from both Type 1 and Type 2 diabetes. See table for adult diabetes in the United Kingdom as at 2013

United Kingdom	Frequency	No. of People
England	6.0%	2,703,044
Northern Ireland	5.3%	79,072
Scotland	5.2%	252,599
Wales	6.7%	173,299

Source: Diabetes UK (2014) Adapted by Author (2021)

Further, In the United Kingdom (UK), a smaller proportion (10%) of adults and children are diagnosed with Type 1 diabetes, while a larger proportion (90%) of adults are diagnosed with Type 2 diabetes. This evidence was reported in the work of Diabetes UK (2014) that 10% of

adults and children in the United Kingdom are diagnosed with Type 1 and (90%) of the adult population are diagnosed with Type 2 diabetes. This shows that the United Kingdom is not exempted from diabetes a huge percentage of the adult population suffers from Type 2 diabetes. See table for age group distribution of diabetes in England, Wales and Scotland

Age	England and Wales	Scotland
0-9	0.22%	0.26%
10-19	0.99%	1.23%
20-29	1.69%	2.09%
30-39	3.83%	3.55%
40-49	10.69%	9.69%
50-59	18.95%	18.97%
60-69	26.05%	26.46%
70-79	24.14%	24.67%
80+	13.42%	13.07%

Source: Diabetes UK (2014) adapted by Author (2021)

Risk factors of Type 2 Diabetes

As discussed before, Type 2 diabetes is another continuous lifelong disease where the pancreas is unable to produce insulin to cover the other parts of the human cells (Diabetes UK, 2013, 2014). Similarly, World Health Organization (2008) contends that Type 2 diabetes is caused by the unavailability of insulin from the pancreas to the whole part of the human body. From this perspective, there are various risk factors linked to Type 2 diabetes and some of these risk factors may be as follows

- Older adults from 40 years and over or a South Asian adult who is over 25 years of age
- Black African, Caribbean, Individual people whose parent, brother, sister are affected with diabetes
- Overweight individuals
- Women with a waistline that are bigger than 80cm (31.5in),
- Men with waistline larger than 94cm (37in) or 90cm (35in),
- Individuals suffering from a high blood pressure, a heart attack or a stroke
- Individuals prescribed with anti-psychotic medication to treat mental health condition
- Women affected with polycystic ovary syndrome or have had gestational diabetes (Diabetes UK, 2014).

Intervention of Diabetes

The community based physical activity as well as healthy dieting may be preferred choices to tackle diabetes either Type 1 or Type 2. World Health Organization (2009) and NICE (2016) indicate that people suffering from diabetes either Type 1 or Type 2 may use the community based physical exercise and healthy eating as measures to tackle the illness. This is important because regular physical exercise and eating well may be a catalyst to manage type 1 or Type 2 diabetes. The fact is that regular physical exercise by people affected with either Type 1 or Type 2 diabetes such as promoting walking as well as cycling, providing a build-environment which make people use stair case instead of lifts, and the provision of gym to make people physically, apart physical exercise, government strategies and changing eating behavior may help solve or reduce diabetes.

However, it is also important to ensure that programs on health check as to be effective to manage diabetes. NICE in House of Parliament (2012) argue that individuals affected with type 2 diabetes and with a high risk are provided with a healthy program to manage the disease. This shows that providing health programs for high risk diabetes active Diabetes UK (2013) argue that people with diabetes can be advised to walk, cycle, do some running and use more of the stair case instead of lifts. This implies that diabetes individuals' daily physical activity promotes a healthy lifestyle, lowering the risk of Type 2 diabetes. Again, the House of Parliament (2012) also said that national strategies, education campaign, and changing eating habit may also be intervention strategies that can be used to manage diabetes. Indeed, patients may be a catalyst to solve diabetes sickness.

The UK Government can also adopt strategies to tackle Type 2 diabetes and some of these strategies may be Healthy Lives, and Healthy People program to reduce overweight and obesity. NICE in House of Parliament (2012) argue that UK Government may adopt national strategies like Healthy Lives, and Healthy People program as intervention strategies to prevent overweight or obesity and also to ensure that adult in-take of calories is reduced by 5 billion a day. Other intervention strategies provided by the department of Health UK to address diabetes are Change4life to make people eat healthy and also engage in physical exercise.

Promoting education about type 1 and Type diabetes is crucial in preventing the disease, thus, the UK Government department of health strategy of Change4life can be used to educate people about healthy dieting and engage in regular physical exercise. House of Parliament (2012) argue that educating people about healthy eating and engage daily physical exercise like

running, walking and cycling and even using the stair case may help reduce or prevent diabetes. Additionally, individuals changing their eating behavior by reducing eating food with high salt fat and sugar can help prevent diabetes (House of Parliament, 2012). There has been in increasing concern regarding advertising which targets children online on junk food which may result to diabetes.

Additionally it is important to ensure that food companies to provide good nutritional labeling of their food products by ensuring that the consumers are provided with enough information on the food items. House of Parliament (2012) indicates that food companies are on ethical view to label food items with enough information to customers.

Lastly, the European Union (EU) regulation suggested that food companies may have to label food clearly as a measure to reduce or prevent diabetes. This implies that customers will be harmed with enough information on the type of food they buy as a measure to reduce or prevent diabetes.

Physiology

Physiology Indicates the working of the human body based on normal condition. This is related to diabetes because when the pancreas fails to produce insulin to meet the other body cells, diabetes sets in as a measure that the human body is not working normally, hence, cause the individual to face extreme tiredness, high blood pressure, expose to stroke and others.

Recommendation

. Drawing on this, the following recommendations are highlighted

- There should be policy of intervention to reduce or prevent diabetes (Type1and Type2).
- There should be education on dieting to reduce or prevent diabetes.
- There should be Up Government strategies through the department of health to promote Cage for life to educate people about healthy dieting and engage in regular physical exercise.

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