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Literature Review

Literature Review: Type 2 Diabetes in Kuwait

T2D accounts for about 90% of all diabetes cases, equating to approximately 1 in 11 adults. The prevalence has continued to increase, which is largely believed to be due to the increasing adoption of a Westernised diet and the presence of obesogenic environments, ageing and increasing urbanisation (Zheng et al., 2017). In the Middle East, many of the issues surrounding diabetes prevalence are believed to be associated with a low level of physical activity engagement and much of the population leading sedentary lifestyles. While there remain several health issues surrounding T2D, it is key to consider the economic impact of T2D and, more so, the scale of the issue in the Middle East.

Economical Impact of T2D

It is estimated that the direct global health expenditures caused by Diabetes directly accounted for $760 billion, approximately £552,787,596,000, which the IDF (2019) anticipated will increase to $825 billion by 2030 and further increase to $845 billion by 2045. Globally, many countries with the largest estimated expense are typically either in Northern and Southern America or Asia. Specifically, the USA has an estimated expenditure of $294.6 billion, followed by Brazil and China with $52.3 billion and $109.0 billion, respectively. While it was noted earlier that the higher age groups tend to be more impacted by Diabetes, this is not necessarily true for the expenditure. Specifically, the 60-69 years has the highest annual health expenditure at $177.7 billion, followed by 50-59 years with $173.0 billion, with the 70–79 years age group with $171.5 billion. While it remains the older age groups that are impacted, such figures demonstrate that age does not automatically lead to an increased economic impact, although it should be considered. IDF (2019) reported that approximately 55 million people aged 20 to 79 years lived with Diabetes in the IDF Middle East region during 2019. The report further believes that this figure will increase to an estimated 108 million individuals by 2045, a 96.4% increase. In the IDF Middle East region, the diabetes prevalence is 12.8%, although 45% of the population are undiagnosed.

T2D in the Middle East

The Middle East remains a conspicuous region for type 2 diabetes (T2D), and this has led to several studies being conducted to investigate its prominence, complexity and potential risk factors. Consider the findings from Meo et al. (2019), who investigated the prevalence of T2D amongst men in the Middle East, including Kuwait. The results demonstrated an increased rate for Gulf Cooperation Council states although these areas typically are home to higher socioeconomic climates. Similarly, Farmanfarma et al. (2020) identified areas such as Kuwait and Saudi Arabia (KSA) to have the highest prevalence of T2D (>21%). These areas have continued to receive a great deal of attention due to the growing health problem in the Middle East, which has led to increased morbidity, mortality and the facilitation of healthcare resources (Khan & Hamdy, 2017). The prevalence has continued to increase over the past two decades, as reported by Al-Rifai et al. (2019), who found that women of childbearing age in the Middle East commonly experience T2D or pre-diabetes. This has the potential to cause adverse health conditions. While it is agreed that the prevalence of T2D continues to be a persistent issue in the Middle East, it is key to consider the impact in Kuwait and the increasing challenge which T2D presents.

T2D in Kuwait

Kuwait remains one of the most impacted areas in the Middle East due to continued high levels of T2D. Al Khalaf et al. (2008) revealed that an estimated 15% of the Kuwaiti adult population had received a T2D diagnosis, although it is largely believed to be lower than the actual figure due to the findings that 33% are often undetected (Abdella et al., 1998). Further, the IDF (2019) estimated the prevalence of Diabetes to have progressively enhanced by 4.7% between 2000 to 2019 in adults aged 20-79 years, although similar issues regarding inaccuracies remain prominent. While such issues are evident in Kuwait, the growing rates of T2D have been reflected across the Middle East, although Kuwait was reported to have the highest estimated prevalence of T2D across all IDF regions at 12.2%. In the Middle East, it is anticipated that such rates will continue to grow, with the IDF (2019) estimating that the rate of T2D in the Middle East will grow to 13.9% by 2045. WHO (2016) found that Diabetes accounted for 4% of mortality which is believed to be related to the escalating trends of the last forty years. The prevalence of diabetes demonstrates a trend with increasing age, with

a study from Alkandari et al. (2020) identifying the age group with the greatest prevalence being 60 years or older (64.8%) compared to the least in the 20-29 years age group (5.4%). However, it is important to note that previous studies have highlighted that many patients with diabetes are at a higher risk of hospitalisation, although many of these are preventable. Consider the findings from Al-Adsani and Abdulla (2011), who found that many patients with diabetes were admitted to the hospital commonly for cardiovascular and respiratory diseases as well as Diabetes as a principal diagnosis. Further, such hospitalisations were associated with issues including acute coronary syndrome, pneumonia, heart failure, cerebrovascular accident and chronic obstructive airway disease. Further studies (see. Lin et al., 2016; Adhikari et al., 2012) have noted similar incidences and diabetes-specific causes, including hyperglycaemia, infection and further complications of Diabetes. Therefore, in addition to the rising economic burden related to Diabetes, it can be argued that should better control of the condition be made, it is possible to reduce admissions. As the above studies demonstrate, more must be done to address the growing obesity pandemic and ultimately increasing levels of diabetes to ensure that the health and wellbeing of Kuwaiti population can be enhanced.

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