

# Exploring the Consequences of Health Related Stigma and Discrimination in Persons Living With Type 2 Diabetes

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**Abstract:** *The increase in the prevalence of type 2 diabetes mellitus (T2DM) has gained eminence through media influence and the general public-consciousness. This has brought about a change in perceptions of T2DM with subjective proof of social stigma and obvious discrimination such as public remarks posted on social media in response to articles in the media. Hence, the purpose of this review is to explore the consequences of health-related stigma and discrimination in person living with type 2 diabetes mellitus (Research focus). The critical appraisal skills check lists method was used to screen and select relevant studies and exclude those that are not applicable to the review. A transparency method was used to prevent bias and this entailed the researcher analysing the evidences using critical appraisal and then synthesize the results making sure that the principles of rigour and transparency are applied. Databases searched for this study includes PsycINFO, PubMed, SOCINDEX, Medline, Emerald insight, Research Gate, Science Direct, CINAHL, Discover and Google Scholar databases. It can be proposed from the findings of this review, that diabetes stigma and discrimination exists in a significant way and adversely affects the individual's overall health outcome. This is an under researched area in comparison to other chronic disease conditions. Stigma associated with diabetes is classified as concealable, specific consequences identified are psychological, behavioural and medical. Generally, individuals who are not diabetic often tend to perceive diabetes a disease without stigma. Concealable diseases such as diabetes are identified by most people to be less-stigmatized in comparison to non-concealable conditions. And most persons living with diabetes do not often report incidences of discriminations and stigmatization because they are not fully aware of being discriminated at for such behaviours are considered to be a normal aspect of some culture.*

**Keywords:** Diabetes; stigma; discrimination

## 1. INTRODUCTION

Diabetes is an increasing global health challenge of the 21st century and of a progressive epidemic at an alarming rate especially among 18-65 years old [1]. According to the International Diabetic Federation (IDF), individuals within 40-59 years range are affected the most, however, men are more affected by diabetes than women [1]. In 1980, the national Diabetic Data Group (USA) in conjunction with the World Health Organization (WHO) expert committee on Diabetes Mellitus gave a classification, stages and the process of diabetes: (gestational which is the diabetes that is first seen/noticed in pregnancies, types 1 which occurs when the beta-cells are destroyed as a result of non-autoimmune and auto-immune reactions, type 2, juvenile and secondary diabetes e.g. hemochromatosis-related diabetes), the aetiology of various types of diabetes, complications and the tests used in diagnosing each of the different type [2]. Type 2 diabetes is a more multifaceted metabolic disorder such as: obesity, hypertension, polycystic ovary syndrome which is associated with B-cell dysfunction and varying degrees of insulin resistance [3]. Research suggests that childhood obesity is a predisposing factor to the rise in Type 2 diabetes mellitus (T2DM) especially among young adults [4]. This project will however focus majorly on type 2 diabetes and the consequences associated with stigma and discrimination in persons living with T2DM.

According to [1], T2DM currently affects more than 387 million people globally and is growing in prevalence especially in under developed nations and in people of poor social economic status in developed nations. Its physical impact is well documented, with diabetes management, treatment compliance and complications having significant inferences on the health of both individuals and communal, psychological well-being, quality of life and global economy as well [5]. In the last century, milestone studies have confirmed that T2DM is preventable through the role of behavioural and individual responsibility [3,6]. Like-minded, annual records from 2013 IDF revised one of its policy named "The Global Diabetes Plan 2011-2021" and acknowledged three core objectives of utmost importance in controlling the rising prevalence of diabetes, which comprises of: the improvement of health outcomes, prevention of future incidences of diabetes and the pursuit of health equity and social justice through stopping the stigma and discrimination of people with diabetes [1]; this forms the foundation of my research. IDF further restated its pledge in appraising the advancement of the 9 global objectives for diabetes and non-communicable diseases (NCD) and the reinforcement of social action on the significance of the effect of diabetes on the programme for improvement and global health.

The increasing prevalence of T2DM has gained prominence through media influence and the general public-consciousness; this has brought about a change in perceptions of T2DM with subjective proof of social stigma and obvious discrimination such as: public remarks dispatched online in response to articles in the media [6]. Although there may not be evidence of T2DM in the individual immediately, however, some risk elements such as: obesity, daily self- management need (injecting insulin, taking medication, diet modifications and blood glucose checks) which may be noticeable to others and invariable lead to adverse

consequences like discrimination and stigmatization. This has made diabetic individuals to engage in risky and unhealthy behaviours like hiding in toilets to take their insulin, which can lead to non-compliant with treatment regime and thereby predisposed them to conditions such as: hypoglycaemic attacks, ketoacidosis, necrosis/gangrene and ultimately death [6,7]. Researches undertaken in diabetes focused majorly on the medical and physical aspects of treatment and management of the on- going disease process; increase in research interest on the psychological phases of diabetes such as melancholy and the influence of diabetes upon the quality of life [8]. However, the major concerns of persons living with T2DM are the stigma associated with it socially and in a negative way. Stigma is a common universal phenomenon and has received significant research responsiveness in certain medical conditions. Nonetheless, it is a comparatively under-researched in diabetes [3]. The past decades have witnessed the emergence of published studies which have demonstrated that T2DM is preventable, this unvaryingly placed emphasis on the importance of the behavioural role of individual in contributing to advancement of the disease condition [3,9]. Furthermore, researchers have been able to prove the negative outcomes related to stigma in T2DM, however, understanding the processes will aid in the formulation of public health policies which will reduce the diseases burden [10].

**1.1 Aim and Objective of the Study**

The overall aim of this research is to explore the consequences of the existence of stigma in diabetes and to identify approaches to reduce health discrimination and stigmatization of the challenges of health stigma experienced by individuals living with T2DM. The research objectives include identifying the causes and sources of stigma and discrimination in persons living with T2DM.

**1.2 Research Question**

What are the consequences of health related stigma and discrimination of young and older adults living with T2DM?

**2. METHODS**

This paper is a systematic review which is based on the appropriate empirical research essential to identifying effective ways of reducing stigma and discrimination among people living with T2DM and health care providers. According to [11], systematic reviews are not only useful in evidence synthesis but also provide answers to the research questions poised. This systematic review shall synthesize evidences through analysis of results from numerous studies and give a summary of available evidences. Databases searched include PsycINFO, PubMed, SOCINDEX, Medline, Emerald insight, Research Gate, Science Direct, CINAHL, Discover and Google Scholar. Initial searches on the databases was carried out on articles published in English Language using various strategies such as the subject matter and keywords such as Diabetes, stigma, discrimination, social exclusion, psychological effect of diabetes and causes/sources of stigma in diabetes.

The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (**PRISMA**) guidelines was used to achieve the selection of studies for this review, these include: the identification of studies, screening, eligibility and inclusion of studies [11]. In order to arrive at a good selection process, the study selection strategies, inclusion and exclusion criteria for this review were carried out at the beginning of the review. A total of 55,540 studies popped up at the initial search for stigma and type 2 Diabetes, while a further search for discrimination and type 2 Diabetes produced a total of 113,551 studies. Using Boolean method in the advanced search, it was narrowed down to 387 studies. 247 of the studies were duplicated research; therefore, these were removed leaving potential studies of 140. The identified potential studies were screened further and finally narrowed down to 19 studies. The screening was conducted in two phases; first segment included the screening of titles and abstracts, while the second phase included the use of full text screening. Reference [12] postulated that the process of screening is an integral feature in undertaking systematic reviews. Thus, specific attention was paid to the screening process of articles included in this review. Abstracts of the chosen 19 studies were thoroughly read and assessed for importance to the study. Studies that showed insufficient research rigor, failed to measure up to set standard for inclusion criteria and the ones that did not measure up to the critical appraisal checklist were promptly eliminated after reading the complete articles. In the end, 10 studies scaled through the eligibility criteria; these were selected for the review. The review search was rigorously followed so as to ensure that the correct evidences which best answers the research question would be generated.

**Table 1:** Inclusion and exclusion criterion for studies reviewed

Inclusion criterion	Exclusion criterion
Studies with a principal emphasis on stigma in Type 2 Diabetes.	Studies with a primary focus on chronic conditions such as: obesity, leprosy, epilepsy and HIV and AIDS.
Studies related to discrimination in Type 2 diabetes	Studies unrelated to discrimination in type 2 diabetes.
Studies with a principal emphasis on social exclusions in patients with Type 2 Diabetes.	Studies with a principal emphasis on social exclusions in other chronic conditions.

Studies related to stigma and self-management of Type 2 Diabetes.	Studies unrelated to stigma and self- management in Type 2 Diabetes.
Studies published in English Language.	Unpublished studies, or published in other languages irrespective of how relevant they seem to be.
Studies that demonstrated sufficient rigorous techniques and scaled through the CAPS appraisal check list.	Studies that failed to demonstrate sufficient rigors in methodologies and failed to meet the CAPS appraisal check list.
Studies that displayed the sample size used, with clearly defined methods of data collection and included ethical considerations.	Studies that failed to report the size of the sample used ethical consideration, data collection and un-cleared research processes.
Studies with year of publication not earlier than 2003.	Studies published earlier than 2003.
Articles that had undergone a peer review.	Studies that were not peer reviewed irrespective of how relevant they appear.

### 3. RESULTS AND FINDINGS

#### 3.1 Summarized research findings

The table below shows a summary of the outcomes deduced from the studies included in this review. The study samples, interventions, resultant measures and findings were included as well. The researches featured stigma in T2DM or discrimination experienced by persons living with T2DM or a combination of both, focusing majorly on patient experience across different settings.

**Table 2:** Summarized tables of research findings

Study Reference	Sample Size	Study Design	Study Characteristics	Outcomes measured	Evidences of experienced stigma	Results
[13]	N= 25	Qualitative descriptive design using semi-structured interviews	Persons living with T2DM for over 2 years	Negative experiences of self-administered injections(insulin) and the publics' perception of persons living with T2DM	Yes	Dismissal from work as a result of living with T2DM. Public perceives persons living with T2DM as illicit drug users, leading to Social exclusions
[14]	N= 333	Qualitative design using focus group	Persons living with T2DM for over 2 years	The psychological experiences of stigma and discrimination in persons living with T2DM	Yes	Persons living with T2DM were denied employment due to disease Condition. Denied the opportunities of acquiring medical/life insurances. Decreased sexual relations and functions.
[15]	N= 85	Qualitative using Focus groups and ethnographic	Persons living with diabetes for over 2 years with co-existing disease conditions such hypertension	Reconceptualising stigma as an asymmetric social process that devalues relationships and the impact of diabetes on daily life experiences	Yes	Misconceptions about the disease process of diabetes leads to social exclusion of person living with DM with cultural disposition playing a prominent role. The biophysical effects of DM precede and transcends stigma associated with the disease process.
[16]	N= 4	Qualitative interpretative	Individuals diagnosed with	Influences of community services,	Yes	Health promotions and campaigns on creating

		approach using in-depth semi structured questions	T2DM for over 2 years	food, family relationships and unsupportive roles of health workers.		awareness about diabetes brought about a reduction in the misconceptions about diabetes which led to a decrease in social stigma associated with diabetes.
[3]	N = 25	Qualitative study, thematic analysis	Adults over 18 years living with T2DM for over 2 years	Consequences of social stigma in diabetes	Yes	Experiences of diabetes related stigma has a significant impact in a negative way on the psychological lives of persons living with T2DM
[6]	N= 25	Qualitative design, using semi structured interviews and thematic analysis.	Adults of over 18 years diagnosed with T2DM for over 2 years	The perceptions and experiences of stigma from the perspectives of persons living with T2DM	Yes	Reported negative experiences of persons living with T2DM, feeling blamed, guilty, stereotype and restricted opportunities in life.
[17]	N= 100	Qualitative design	Individuals whose human and social lives were discriminated against as a result of living with T2DM	A comparison between persons who experience some forms of discrimination and reported and those who failed to reports acts of discrimination	Yes	Actual levels of discrimination not certain due to complexity of subject and lack of non – reporting discriminative acts by most persons living with T2DM
[18]	N= 125	Questionnaires and interviews	Working class (full time employment) persons diagnosed with T2DM for over 9 months	Discrimination at work place as a result of living with T2DM	Yes	Persons living with T2DM experience stigma at the work place due to frequency of hospital visits/ hospitalizations.
[9]	N=30	Qualitative using semi-structured interviews	Individuals newly diagnosed with T2DM	Non- attendance at a structured diabetic education meetings due to fear of being labeled ‘diabetic’	Yes	Shame and stigma of being diagnosed with T2DM prevented participants from benefitting from a well structured educational diabetic sessions which could have immensely benefitted them to improve self-care and management of disease conditions
[13]	N= 185	A qualitative design using interviews.	Obese patients with poorly managed T2DM	Discrimination related to weight, diabetes related distress and self-care activities.	Yes	Stigma experienced at work place due to frequency in hospital visits and hospitalizations.

### 3.2 Results

Fear, blame, and disgust were identified as the major causes that contribute in a significant manner to the development of health related stigma and discrimination in persons living with T2DM [3,20]. Furthermore, the influence of health promotional campaigns through social media portraying diabetes as a disease caused by poor lifestyle choices contributes majorly to the increase of stigma development in T2DM. The second sources of diabetes-related stigma identified from the literature review were healthcare professionals stigmatizing attitude towards patients diagnosed with T2DM which led to dodging appointments, changing service providers and seeking alternative source of advice such as the internet [6,21]. This practice is detriment to the patients' health outcome. Furthermore, difficulty in transferring acquired knowledge to practice effectively due to the perception of hospital staff non-supportive behaviour led to poor self-care and management of disease condition.

Reference [16] identified the deficiency of skilled and specialist healthcare practitioners in diabetes treatment and management as the key contributor of stigma from health care professionals. Affirming, [9] established the inclusion of some specifically structured diabetes educational models approved by NICE (National institute for health and care excellence) such as: the Diabetes Education for on-going and newly diagnosed diabetes (DESMOND), X-PERT, and the diabetes manual achieved a significant decrease in the development of diabetes stigma. They further postulated the even distribution of specialist health diabetes clinics and the training of more diabetes specialist professionals will act as a barrier to the emergency of stigma and discrimination in T2DM. On the contrary, [22] criticised these diabetic educational intervention program as a waste of government resources and unnecessary expenditures.

Additionally, three major factors were identified as outcome of the consequences of health related stigma and discrimination on persons living with T2DM, firstly psychological (low self-esteem, self-blame, fear, worry, anxiety, depression and suicidal tendencies). According to the Centre for Disease Control, anyone diagnosed with diabetes has a triple chances of developing depression, highlighting further that diabetes and depression are inter-related and almost have the same predisposition risk factors such as: obesity, coronary artery diseases, hypertension, in activities and the presence of a family history. Depression has been identified as one of the lethal consequences of diabetes as it leads to a term known as 'diabetic burnout' which adversely affects the physical health status of the individual and acts as an instigator of life-long complications [22]. Depression also predisposes persons living with T2DM to poor adherence to dietary modifications and medication regimen. This invariably results to a decrease in the quality of life of persons living with T2DM.

Conversely ant-depressants have the capacity to instigate the onset of hypoglycaemic which poses as a serious challenge in the effective self-management of disease condition. Actions which include efforts to conceal disease condition at all cost due to fear of status loss, leading to engaging in unhealthy practices like injecting insulin in unhygienic environments; have disastrous consequences as families, friends and colleagues would be at a loss of what to do in cases of hypoglycaemia which is a medical emergency and thus predisposing the individuals to developing serious complications of diabetes. The difficulty in conforming to dietary modification at social gatherings leads to social exclusion. Reference [3] identified the association of the onset depression in persons with T2DM and perceived discrimination and stigmatization. And lastly Medical which is the larger utilization of health service resources, a drain on hospital and society resources and the complications arising from poor self-care and management of disease conditions such as disabilities (blindness from diabetic retinopathy) and amputations from gangrene or diabetic neuropathy. This was termed the biophysical disruptive effect of diabetes which can leave the individual helpless, hopeless and attempts at self-harms.

Based on the findings of this research, it can be ascertained that there are evidences of stigma and discrimination connected to diabetes. Negative stereotypes such as blame and shame which are extremely prominent in T2DM, where persons with T2DM are constantly being judged and blamed by others for bringing the disease on themselves, a culture of continual observations by families and friends over food choices and blood glucose monitoring places the individual in a constant state of anxiety. Some studies demonstrated the denial of persons living with T2DM of some life time opportunities such as: employment, purchasing of medical/life insurances and adoption of children, [6,17,18]. This places a restriction on such opportunities to persons living with T2DM and enhances the development of inequality. Another study identified T2DM as a disease of life-long burden on family and friends and a decrease in sexual relationships and functions [18]. Reference [15] identified the public's perception of the on-set of diabetes genetically related; which invariably led to a reduction of prospective suitors due to avoidance of diabetes as one of the major consequences of living with T2DM in an African context.

#### **4. CONCLUSIONS**

From the evidences generated from available literatures' and the findings of this review, it can be proposed that diabetes stigma and discrimination exists in a significant way. Stigma associated with diabetes is classified as concealable. Generally, individuals who are not diabetic often tend to perceive diabetes a disease without stigma. Concealable diseases such as diabetes are identified by most people to be less-stigmatized in comparison to non-concealable conditions. The bias towards diabetic people at the community level is also perceived to be negligible.

And most persons living with diabetes do not often report incidences of discriminations and stigmatization because they are not fully aware of being discriminated at for such behaviours are considered to be a normal aspect of some cultures. When persons living with T2DM perceived any forms of stigma and discrimination, it has great impact on their psychological health and invariably leads to sub-optimal self-care and management which results to poor prognosis of disease process. Meanwhile, health related stigma and discrimination are driven by the mind-sets of blame, disgust, fears and the need to implement societal norms.

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