Scientific Research Publishing

Open Journal of Internal Medicine, 2025, 15(1), 52-63
https://www.scirp.org/journal/ojim
ISSN Online: 2162-5980
ISSN Print: 2162-5972

Experience of Diabetic Patients Monitored in Hospital in Lomé

Toyi Tchamdja[1*], Lihanimpo Djalogue[1], Adéni Murielle Christelle Ines Koutchakpo[2], Kossi Kodjo[2], Kodjo B. M'bortché[2], Sosso Tovignikou[2], Komi Edem Mossi[2], Essohanam Tambourou[3], Abago Balaka[2]

[1]Department of Internal Medicine, Kara University Hospital, Kara University, Kara, Togo
[2]Internal Medicine Department, Lomé University Hospital, University of Lomé, Lomé, Togo
[3]Psychology Department, Lomé University Hospital, Lomé, Togo
Email: *ttpault234@gmail.com

How to cite this paper: Tchamdja, T., Djalogue, L., Koutchakpo, A.M.C.I., Kodjo, K., M'bortché, K.B., Tovignikou, S., Mossi, K.E., Tambourou, E. and Balaka, A. (2025) Experience of Diabetic Patients Monitored in Hospital in Lomé. *Open Journal of Internal Medicine*, **15**, 52-63.
https://doi.org/10.4236/ojim.2025.151007

Received: November 22, 2024
Accepted: March 8, 2025
Published: March 11, 2025

Abstract

Objective: To describe the experience of diabetes in diabetic subjects followed at the Sylvanus University Hospital Center. Olympio (CHU-SO) in Lomé, Togo. **Method:** Cross-sectional study among diabetic patients seen in diabetology consultation at the internal medicine department of the Sylvanus University Hospital Center Olympio de Lomé from July 6 to October 9, 2021. We described the sociodemographic characteristics, the experience at the announcement and the daily experience. **Results:** A total of 153 patients were surveyed. There was a female predominance with 93 women respondents (sex ratio = 0.64). The average age was 54.5 ± 11.78 years with extremes of 10 and 84 years. The median duration of diabetes was 6 years with an interquartile range (IQR) = [3 years - 11 years]. Type 2 diabetes was the most represented at 88.9%. Seventy-nine-point sixteen percent of respondents had poor diabetes control based on glycated hemoglobin. The announcement of diabetes was painfully experienced by 56.9% of respondents and the emotions felt at the announcement were mainly sadness (31.4%) and fear (22.9%). The most represented daily difficulty was diet in 36.5% of cases, followed by lack of financial means to honor prescriptions in 29.4%. **Conclusion:** Knowledge of the experience of diabetes in diabetic subjects is essential for establishing a therapeutic education plan.

Keywords

Diabetes, Experience, Painfull, Emotions, Lomé (Togo)

1. Introduction

Diabetes is a group of metabolic disorders characterized by chronic hyperglycemia

in the absence of treatment. It is a defect in the secretion and/or action of insulin as well as disorders of the metabolism of carbohydrates, lipids and proteins [1]. It is a major public health issue due to its scale and the severity of its complications, which affect the duration and quality of life while generating excessive health expenditure [2]. Indeed, Africa is experiencing a rapid increase in the prevalence of diabetes. According to the latest estimates from the International Diabetes Federation (IDF), the number of diabetics in Africa will almost triple between 2017 and 2045, from 16 million to 41 million [3]. In Togo, the STEPS survey carried out in 2010 noted a prevalence of diabetes at 2.6% [4]. In 2021, this prevalence is estimated at 4.9% [5]. These figures demonstrate the unprecedented increase in the number of new cases of diabetes in the Togolese population.

Diabetes management is long and restrictive, requiring therapeutic compliance, with the aim of preventing complications and relapses. Good therapeutic compliance first requires good disclosure of the disease. The disclosure of a chronic disease such as diabetes exposes the patient to a dual learning process involving self-management of their disease and treatment, but also establishing a new relationship with themselves. In addition to the constraints of acceptance, renunciation and trials that the disease engenders, the patient makes efforts to learn and acquire new skills and maintain them over time. Thanks to the patient's therapeutic education, the patient sets objectives and goals that are negotiated with caregivers [6]. The experience of the disease by the diabetic subject is often misunderstood or ignored even though it serves as a basis for therapeutic education and thus occupies an important place in the management of the disease [7].

In the literature, many studies have been conducted on diabetes and its complications, but few have described the experience of diabetes in Africa, particularly in Togo. Hence, the objective of this work was to describe the experience of diabetes in diabetic subjects at the Sylvanus University Hospital Olympio (CHU-SO) in Lomé, Togo.

2. Material and Method

This was a cross-sectional study with a descriptive aim carried out from July 6 to October 9, 2021, *i.e.* 3 months in the internal medicine department of the CHU-SO of Lomé.

The study population consisted of diabetic patients who came for a diabetology consultation in the internal medicine department of the CHU-SO. The following diabetic patients were included in the study:

- known for at least 3 months, aged at least 10 years;
- been on treatment for at least 3 months;
- present at the time of the investigation;
- having given their consent to participate in the study;
- young people under 18 whose accompanying person has given consent.

Diabetic patients were excluded from the study:

- unable to answer the questionnaire (aphasic, having a cognitive disorder);

- and non-cooperators, refusing to participate in the interview.

Our sample size was calculated from the following Schwartz formula [8]:

$$n = \frac{(U\alpha)^2 * (pq)}{i^2}$$

with:

p: Prevalence of diabetes in the Togolese population in 2010 was 2.6%.

$p = 2.6$.

n = Sample size.

$U\alpha = 1.96$, which is the reduced deviation for a risk of error $\alpha = 5\%$.

$q = 100 - p$.

$i = 2.6\%$ (desired precision).

$$n = \frac{1.96^2 * (2.6 * 97.4)}{2.6^2}$$

where $n = 143.91$ or 144 diabetics.

We made an increase of 5%, the sample size after increase was 151 diabetic subjects minimum to be surveyed.

The sampling was exhaustive. In fact, all patients during the study period, meeting the inclusion criteria, able to answer the questionnaire and having given their consent to participate in the interview were taken into account.

The variables studied were:

❖ **Socio-demographic characteristics:** Age; gender; occupation; marital status; educational level; religion.

❖ **Clinical data of diabetes:** Duration of diabetes progression; type of diabetes; number of subjects having achieved HbA1c, number of subjects having an HbA1c greater than or equal to 7; chronic complications of diabetes; current treatment of diabetes; previous hospitalization for a complication of diabetes.

❖ **Experience of the diabetic patient:**

- Experience of the announcement of diabetes by the respondent: painful, acceptable or indifferent, reactions and emotions of the respondent to the announcement;
- The respondent's entourage knowing their diabetic status, reaction of those around them after the announcement, wanting to share their status with those around them, reasons for not wanting to share their diabetic status with those around them, stigmatization or not by those around them;
- Daily experience of diabetes: daily difficulty with diabetes, change in daily life linked to diabetes, restrictions linked to diabetes, help provided by loved ones, influence of diabetes on morale, falling into depression linked to diabetes, voluntary cessation of treatment, daily difficulty in care, highlights of life with diabetes.

The influence of cultural beliefs, practices, and social support systems were not searched in this study.

The collection tools used for data collection were an individual interview guide

addressed to the subjects surveyed and the patients' medical notebooks. The collection technique used was a face-to-face interview between the investigator and the subject using a questionnaire composed of semi-closed and open questions. We used the semi-directed interview which consisted of asking the patient the question and waiting for his response. The processing and analysis were done using Epi Info 7.1.1 software, Microsoft Word and Excel version 2019.

We have defined the:

- **Lived:** Through experience, facts and events of real life. The lived experience described in this work concerns the facts, experiences, events of everyday life related to diabetes among the respondents.
- **Profession:** Paid and regular activity carried out to earn a living.
  - Trader: A person trading as a sole proprietorship or partnership. All levels of trade scale were included, including resellers.
  - Student: A person studying in middle or high school.
  - Civil servant: Person who holds a permanent position in a public administration.
  - Housewife: Unemployed woman, responsible for household chores and raising children.
  - Worker: A person exercising a manual or mechanical trade. Farmers, tailors, craftsmen, mechanics, welders, braiders, masons.
  - Retired: A person who has ceased professional activities at a certain age.
- **Marital status:** Marital status of a person.
  - Married: A person officially united by the bonds of traditional marriage, at the town hall or at church.
  - Single: A person of marriageable age but who is not married. All subjects over 18 years of age were included.
  - Divorced: A person who has broken off their marriage ties with their spouse, whether it be a traditional, town hall or religious marriage.
  - Widower: Person whose spouse has died.
  - Not applicable: All subjects under 18 years of age, not of marriageable age.
- **Educational level:** Current or achieved level of education of the subject.
  - Unschooled: Someone who has never attended school.
  - Primary level: Person who has studied or is studying from kindergarten or CI to CM2.
  - Secondary level: Person who has studied or is studying from 6th grade to final year and has the baccalaureate.
  - Higher level: Subject who has completed higher education after the baccalaureate.
- **Experience of being diagnosed with diabetes:**
  - Acceptable: A person who has accepted their diabetic status.
  - Painful: Psychological suffering associated with the announcement of the illness.
  - Indifferent: A person who does not experience any particular feelings, showing

detachment.

❖ **Reaction of the respondent to the announcement of the diagnosis:**

- Shock: Emotional or psychological. A person who is stunned, immobile, unable to act or reason, agitated, who screams aimlessly, or a person who acts automatically without thinking as if he were physically present but mentally absent.
- Sadness: A person who feels melancholy, sorrow. A person who is afflicted and depressed.
- Fear: Someone who is panicked, frightened, anxious.
- Anger: A person showing violent discontent which may manifest itself through aggression.
- Surprise: A person who is surprised, astonished.
- None: No one who showed any particular reaction.

❖ **Reactions of the respondent's entourage:**

- Rejection: Rejecting, excluding the diabetic because of his status.
- Indifference: Having no particular reaction, showing detachment from the situation or the news.
- Advice: Tell the diabetic what he should do to cope with his illness, recommend something or someone who can help him according to the opinion of those around him.
- Surprise: Astonishment, amazement of those around you after sharing the announcement.
- Support: Provide comfort to the diabetic subject. This is moral support.

❖ **Morale:** Morale can be defined as a state of mind dominated by negative emotions such as anger and sadness.

All patients were informed of the anonymized use of their data and signed a free and informed consent form.

3. Results

3.1. Sociodemographic Data

A total of 153 subjects were included in this study. The mean age of the respondents was 54.50 ± 11.78 years with extremes of 10 and 84 years. The age range [55 - 70 years[was 46.4%. Of the 153 respondents, 93 (60.8%) were women with a sex ratio of 0.64. Regarding the profession, Civil servants and traders represented 51 (33.3%) and 42 (27.4%) of the respondents respectively. Among the 153 respondents, 118 (75.3%) were married. As for the level of education of the respondents, 68 (42.5%) had a secondary level and 38 (2.8%) a higher level. Finally, the respondents practicing the Christian religion was 125 (81.7%).

3.2. Clinical Data of Diabetes

Among the 153 respondents, 145 were aware of the duration of their disease. The median duration of diabetes was 6 years, with an Interquartile Range (IQR) = [3 years - 11 years] and extremes of 3 months and 44 years. The duration of [1 - 5 years] was 40.7%. This is type 2 diabetes for 136 (8.9%) of respondents.

Of the 153 surveyed, 120 had performed HbA1c. Of the 120, 95 or 79.16% had an HbA1c greater than or equal to 7%. The mean HbA1c value was 9.18 ± 2.72. The main chronic complications found in patients were neuropathies representing 25.5%, followed by stroke at 17% and retinopathies at 16.3%.

Regarding the antidiabetic treatment used by patients at the time of the survey, oral antidiabetics alone were taken by 91 (59.5%) respondents and 29 (18.9%) took insulin alone.

3.3. Diabetes Experience

Lived at the announcement

The announcement of the illness was painful for 87 (56.9%) respondents and acceptable for 23.5%.

The main emotions felt by the respondents were sadness in 48 (31.4%), fear in 35 (22.9%) and shock in 20.9% (Table 1).

Table 1. Distribution of respondents according to emotions when learning of the illness.

	Number	Proportion
Sadness	48	31.4
Fear	35	22.9
Chock	32	20.9
Surprise	24	15.9
Anger	10	6.5
None	58	37.9

Sharing diabetic status with those around you and their reaction

Among the 153 respondents, the desire not to share their diabetic status was expressed by 20 (13.1%) respondents. The reasons given in half of the cases were fear of stigmatization by those around them. Thus, 25 (16.3%) reported having been stigmatized by those around them because of their diabetic status.

Table 2. Distribution of respondents according to reaction of those around them to the announcement of diabetes.

	Number	Proportion
Support	102	66.7
Advices	34	22.2
Chock	21	13.7
Surprise	20	13.1
indifference	14	9.2
Others	03	2.0

Others: Reprimand on eating habits and lack of awareness of the disease by those around you.

Sharing of status was done with family at 96.7% and friends and acquaintances

at 11.1%. At the announcement, the reaction of the entourage was support (66.7%), advice (22.2%) and shock (13.7%) as indicated in Table 2.

Impact of diabetes on the daily lives of diabetic patients

The daily difficulty was the diet for 56 (36.5%) respondents followed by the lack of financial means to honor drug prescriptions and check-ups for 45 (29.4%) respondents.

Changes in daily life were represented by dietary habits in 54.2% of cases and reduction in physical abilities (Table 3).

Table 3. Distribution of respondents according to changes in daily life related to diabetes.

	Number	Proportion
Eating habits	83	54.2
Reduction of physical abilities	46	30.1
Weight loss	30	19.6
Meal times	19	12.4
Negative repercussions on professional activity	16	10.5
Sexual weakness	15	9.8
Expenses related to care	10	6.5
Psychological damage	10	6.5
Regular physical activities	7	4.6
Regular blood sugar monitoring	6	3.9
Deprivation of outings	5	3.5
Others	4	2.6

Others: Weekly blood sugar monitoring, carrying a sugar cube in your pocket, less respect and consideration from those around you, and depressed mood due to diabetic status.

Table 4. Distribution of respondents according to dietary restrictions imposed by diabetes.

	Number	Proportion
Reduction in consumption of sugar	50	31.2
Reduction in consumption of alcohol	20	13.7
Reduction in consumption in food	15	9.8
Reduction in consumption in fat	13	8.4
Reduction in consumption in salt	10	6.5
Reduction in snacking	5	3.2
Others	3	1.9

Others: Reduction in cube consumption, reduction in fruit consumption, and preferring wine over beer.

As for the restrictions imposed, dietary restrictions were observed on 116 patients (75.8%) and the cessation of professional activities (13.1%) were the most

notified.

Regarding dietary restrictions done by the 116 patients, these included reducing sugar consumption (36.2%), alcohol (13.7%) and food quantity (9.8%), as shown in Table 4.

Regarding care, 100 (65.3%) patients reported experiencing difficulties in their daily lives due to lack of financial means (60%), the daily taking of oral antidiabetic medications and compliance with hygiene and dietary measures (10%) (Table 5).

Table 5. Distribution of respondents according to difficulties in the daily management of diabetes.

	Number	Proportion
Lack of financial means	60	60
Daily intake of ADOs	10	10
Respect for MHD	10	10
Others	6	6
Insulin therapy	5	5
Hypoglycemia	5	5
Meal times to be readjusted with the intake of ADOs	4	4

ADOs: Oral antidiabetics; MHD: Hygiene-dietary measures. Others: follow-up appointments with doctors are difficult because there is little time to express our concerns, cohabiting with people who do not know your status, overflowing during consultations, the results of the assessments are not available at all, and hospitalization for diarrhea due to regular consumption of vegetables.

As for the psyche, diabetes had influenced the morale of 109 (71.2%) of the respondents.

4. Discussion

We conducted a study on the experiences of diabetic patients followed in the Internal Medicine department at the SO University Hospital in Lomé. A total of one hundred and fifty-three (153) diabetic subjects were included in our study. The mean age of the respondents was 54.50 ± 11.78 years with extremes of 10 and 84 years. The most represented age group was [55 - 70[with a proportion of 46.4%. The sex ratio was 0.64.

The announcement of diabetes was painfully experienced by 56.9% of our respondents. Sixteen point three percent (16.3%) of our respondents reported having been stigmatized by those around them because of their diabetic status. Diet and lack of financial means to honor drug prescriptions and follow-up assessments were the daily difficulties that our respondents faced the most at 36.6% and 29.4% respectively. Daily changes related to diabetes were varied, mainly eating habits at 54.2%, and reduced physical abilities at 30.1%.

Our work has limitations related to the monocentric nature and the non-exhaustiveness of the questions. However, the rigorous sampling and the collection technique constitute a strength.

4.1. Sociodemographic Data

In our study, the average age of our respondents was 54.50 ± 11.70 years. This average is close to that found in the study by Traoré *et al.* [9] in 2021 in Mali which was 54.23 ± 15.95 years and in the study by Mizouri *et al.* [10] in 2021 in Tunisia which was 55.08 ± 14. 22 years. This supports Buysschaert [11] who stated that type 2 diabetes mainly affects subjects aged 40 and over. A female predominance was also noted with a sex ratio of 0.64. A female predominance of 57.5% is also found in the study by Séré *et al.* [12] in Burkina Faso in 2021. Our results are also similar to those found by Houngla [13] in Benin in 2020 with a proportion of women at 76.58%.

The female predominance found in these various studies conducted in Sub-Saharan Africa could perhaps mean that women tend to be more overweight and obese compared to men.

Regarding marital status, the majority of respondents in our study were married, *i.e.* 75.3%. These results are similar to those found by Mogounwafo [14] in Mali in 2014 and those of Houngla [13] in Benin in 2020, which found 62.8% and 65.5% of married people respectively.

4.2. Clinical Data of Diabetes

In our study, the median duration of diabetes was 6 years. Approximately 71.8% had a duration of diabetes of less than 10 years. Our results contrast with those of Sawadago *et al.* in Burkina Faso in 2020 who found the median duration of diabetes to be 10.4 years [15]. In fact, the frequency of unrecognized and incidentally discovered type 2 diabetes is not negligible [16]. The circumstances of discovery of the disease vary from one country to another depending on the degree of medicalization and awareness of the populations [17]. It therefore appears that the durations of type 2 diabetes found in the different studies do not actually reflect the real duration of the disease.

Regarding the type of diabetes, type 2 was the most common. Our results are similar to those of Némi *et al.*'s 91.2% [16] in Togo in 2019 and Kyelem *et al.* [18] in 2014 in Burkina Faso *who* found 75% and 91.2% of type 2 diabetics respectively. And speaking of degenerative complications, neuropathies (25.5%) were the most common followed by strokes at 17% and retinopathies at 16.3%. These results are consistent with data from the literature [19].

4.3. Experience of the Announcement of the Status

In our study, the announcement of diabetes was painfully experienced by 56.9% of our respondents. The emotions mainly felt were sadness at 31.4%, followed by fear at 22.9% and shock at 20.9%. Our results are similar to those found by Mogounwafo

[14] in Mali in 2014 and those of Pillon *et al.* [20] in 2014 in Madagascar who had collected respectively 62.8% emotional shock and 63.51% anxiety at the announcement of diabetes. In France, Mosnier-Pudar *et al.* [21] in 2009 noted that 68% of respondents had a negative reaction to the diagnosis (anxiety, fear, injustice, fatality, revolt, anger, disbelief) and that 20% were indifferent.

4.4. Sharing and Reaction of Those around You

In our work, the family was the entourage that knew the most about the diabetic status of the respondents at 96.7%. Mosnier-Pudar *et al.* [21] found that 90% of the family entourage knew the diabetic status of the patient and provided assistance in the daily management of care. Consoli *et al.* [22] in 2016 in France, also reported this state of affairs. The family therefore plays a vital role in the management of diabetes.

The help provided by the entourage in our study consisted mainly of moral support at 58.8%, but the help with monitoring of diet, therapeutic compliance and medical follow-up was minimal.

Among our respondents, 21(13.7%) had not did not want to share their diabetic status with those around them. The reasons given by the latter were essentially the fear of stigmatization by those around them in 47.6%, followed by difficulty in accepting the disease at 23.8%. These results demonstrate the need for good disclosure of the disease with the aim of making the patient accept the disease. Similarly, good information should also be given to those around them in order to minimize stigmatization, which was reported by 16.3% of respondents.

4.5. Impact of Diabetes on Daily Life

The most common daily difficulty was diet in 36.5% of cases, followed by lack of financial means to honor drug prescriptions and follow-up assessments in 29.4% of cases. Our results contrast with those of Mosnier-Pudar *et al.* [21] where eating habits are most frequently and easily modified (50%). This is a problem related to adaptation to a new diet low in starch and rich in vegetables. For Mosnier-Pudar *et al.* [21] and Pillon *et al.* [20], regular physical activity was the most common daily difficulty. Regular physical activity is a very important means in the management of diabetes.

These daily dietary difficulties were caused by dietary restrictions (75.8%). These were mainly the reduction of sugar consumption to 31.2% followed by the reduction of alcohol to 13.7%. Pillon *et al.* [20] had noted restrictions in sugar consumption in the order of 37.8% as well as those relating to snacking in 51.4% of patients. These different measures issued by the nursing staff have the role of promoting glycemic balance.

Apart from restrictions of any kind related to care, emotional shock and inflammatory syndrome are the cause of the cessation of professional activities as reported in 13.1% of our diabetic patients. Chambon-Amiot *et al.* [23], in France in 2013, noted that 10% of work stoppages were related to diabetes and 4% to its

complications. It is recommended that the hygiene and dietary measures prescribed to the patient be personalized according to their needs, preferences and values, in particular the composition of meals and the type of physical activity to be practiced. The patient's involvement in the therapeutic decision is very essential because it promotes better adherence [13]. These different measures and advice given to patients in order to have a glycemic balance and delay the onset of somatic complications must also have a psychological component in order to reduce the impact on the morale of patients. Indeed, 109 (71.2%) of our patients had a moral impact, notably depression found in 43.8% of cases. This depression can be overcome by good therapeutic education of patients.

5. Conclusion

Our study provided an overview of the experience of diabetes among Togolese diabetic subjects. Diabetics have a painful experience of their new situation. They are faced with various new restrictions, especially dietary ones, which seriously impact their quality of life and productivity. It will therefore be necessary to provide comprehensive therapeutic education addressing all dimensions of diabetic disease, such as awareness, psychological support and regular monitoring, in order to achieve good glycemic balance.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

[1] Organisation Mondiale de la Santé (2019) Classification du diabète sucré.

[2] Jaffiol, C. (2021) Le diabète en 2021: Progrès, échecs et perspectives. *Bulletins—Academie des Sciences et Lettres de Montpellier*, **52**, 1-14.

[3] International Diabetes Federation (2017) Atlas du Diabète de la FID, Huitième édition. http://www.diabetesatlas.org/

[4] Rapport Final de l'Enquête STEPS Togo 2010 (2010) Ministère de la Santé, Togo 2012.

[5] Rapport Final de l'Enquête STEPS Togo 2021 (2021) Ministère de la Santé et de l'Hygiène Publique, Togo 2024.

[6] Naudin, D. (2019) Importance des fonctions exécutives dans l'observance thérapeutique chez les patients présentant un diabète de type 1. https://hal.archives-ouvertes.fr/tel-02649876/

[7] Bernard, P. (2006) Vécu et représentations mentales de la maladie chez le diabétique type 2. Etude Préliminaire (Thèse), Universite de Nantes.

[8] Rodríguez Del Águila, M. and González-Ramírez, A. (2014) Sample Size Calculation. *Allergologia et Immunopathologia* (*Madr*), **42**, 485-492. https://doi.org/10.1016/j.aller.2013.03.008

[9] Traoré, B., Mariko, M., Sow, D.S., Touré, A.T., Bah, M., Nientao, N., *et al.* (2021) Evaluation du risque podologique chez les patients diabétiques hospitalisés à l'hôpital du Mali (Bamako). *Health Sciences and Disease*, **22**, 24-27.

[10] Mizouri, R., Belhadj, M., Hasni, Y., Maaroufi, A., Mahjoub, F. and Jamoussi, H. (2021)

Relation entre le niveau d'éducation et le risque podologique chez les patients diabétiques. *La Tunisie Médicale*, **99**, 277-284.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8636960/

[11] Buysschaert, M. (2012) Diabétologie clinique. 4ème Édition, De Boeck, 199 p.

[12] Séré, L., Tiéno, H., Yanogo, D., Traoré, S., Nagabila, Y., Ouédraogo, D.D., *et al.* (2021) Prévalence du diabète et facteurs de risque cardiovasculaire associés dans une population rurale au Burkina Faso. *Médecine Tropicale et Santé Internationale*, **1**, B1J8-7K63.

[13] Houngla, M.F.N. (2020) Pratiques alimentaires et gestion du diabète chez les diabétiques suivis au Centre National Hospitalier et Universitaire et à la Banque d'insuline de Cotonou au Bénin. Mémoire de Maîtrise en Nutrition, Université de Montréal.

[14] Mogounwafo, R.M. (2014) Réactions psychologiques des patients diabétiques face à leur maladie dans le service de médecine interne et d'endocrinologie de l'hôpital du Mali de Janvier à Mai 2014. Thèse de Doctorat, Université des Sciences, des Techniques et des Technologies de Bamako.

[15] Sawadogo, A., Semde, A., Dah, J., Diallo, F., Hien, S., Sanou, G., *et al.* (2020) Atteintes rénales des patients diabétiques suivis dans le service de Néphrologie-dialyse du centre hospitalier universitaire Sourô SANOU. *Revue Africaine de Médecine Interne*, **7**, 55-66.

[16] Némi, K.D., Djalogue, L., Djagadou, K.A., Tchamdja, T., Tsevi, Y.M., Balaka, A. (2019) Les modes de révélation du diabète sucré au CHU Sylvanus Olympio de Lomé. *Pan African Medical Journal*, **34**, Article No. 99.
https://doi.org/10.11604/pamj.2019.34.99.20012

[17] Monteiro, B., Gninafon, M. and Amoussou, K.J. (1991) Contribution à l'étude épidémiologique du diabète sucré de l'adulte au Centre National Hospitalier et Universitaire de Cotonou (C.N.H.U.) Bénin. *Médecine*, **38**, 263-269.

[18] Kyelem, C.G., Yaméogo, T.M., Ouédraogo, M.S., Rouamba, N., Sombié, I., Lankoandé, D., *et al.* (2014) Caractéristiques thérapeutiques des diabétiques suivis au CHU de Bobo-Dioulasso, Burkina Faso. *Health Sciences and Disease*, **15**, 1-5.

[19] Monnier, L. (2019) Diabétologie. 3éme Édition, Elsevier Masson, 537 p.

[20] Pillon, F., Tan, K., Jouty, P. and Frullani, Y. (2014) Le traitement médicamenteux du diabète de type 2. *Actualités Pharmaceutiques*, **53**, 23-28.
https://doi.org/10.1016/j.actpha.2014.10.005

[21] Mosnier-Pudar, H., Hochberg, G., Eschwege, E., Virally, M.L., Halimi, S., Guillausseau, P.J., *et al.* (2009) How do Patients with Type 2 Diabetes Perceive Their Disease? Insights from the French DIABASIS Survey. *Diabetes & Metabolism*, **3**, 220-227.
https://doi.org/10.1016/j.diabet.2009.02.001

[22] Consoli, S.M., Barthélémy, L., Idtaleb, L., Le pape, G., Fraysse, M., Dugardin, N., Kherbachi, Y. and Grimaldi, A. (2016) Perception et vécu émotionnel de la maladie et de ses traitements par des patients ayant un diabète de type 2 et en population générale. *Médecine des Maladies Métaboliques*, **10**, 364-375.
https://doi.org/10.1016/S1957-2557(16)30132-8

[23] Chambon-Amiot, L.H. (2013) Etude descriptive de la population salariée diabétique d'un service inter-entreprise du département du Nord. Thèse de Doctorat, Université de Lille.