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RESEARCH ARTICLE OPEN ACCESS

# Lived experiences of patients with type 2 diabetes mellitus regarding self-care management and diabetes-related distress in teaching hospitals in Ogun State

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**Abstract**
**Objective:** Type 2 Diabetes Mellitus (T2DM) requires sustained self-care, yet the everyday realities shaping patients' experiences in low-resource settings remain insufficiently understood.
Objective: This study explored the lived experiences of self-care management and diabetes-related distress among adults with T2DM attending tertiary hospitals in Ogun State, Nigeria.
**Methods:** A hermeneutic phenomenological design was used. Semi-structured in-depth interviews were conducted with 20 purposively selected adults (N=20) receiving care at two teaching hospitals. Interviews were audio-recorded, transcribed verbatim, and interpreted thematically using an iterative hermeneutic approach. Data collection and analysis proceeded concurrently, and saturation was reached at the twentieth interview.
**Results:** Two interconnected interpretive domains were identified: Structured Self-Care Behaviour Within Structural and Relational Constraints and Diabetes-Related Distress as Cumulative Emotional and Material Burden. Participants described self-care as highly routinised but strongly shaped by financial limitations, bodily constraints, and reliance on social support. Distress accumulated over time through treatment workload, economic pressure, and the emotional demands of sustained self-management.
**Conclusion:** Among adults with T2DM in this setting, self-care is negotiated within intersecting structural and relational constraints rather than enacted as purely individual behaviour. Integrating affordable care resources and routine psychosocial support into diabetes services may help reduce the everyday burden experienced by patients.

**Keywords:** Type 2 diabetes mellitus, self-care, diabetes distress, hermeneutic phenomenology, Nigeria

## Plain English Summary

Living with Type 2 Diabetes Mellitus (T2DM) requires daily activities such as monitoring blood sugar, taking medications, adjusting diet, and staying physically active. However, little is known about how patients in resource-limited settings actually experience these demands in everyday life. This study interviewed 20 adults receiving diabetes care at two teaching hospitals in Ogun State, Nigeria. Participants described self-care as highly structured but strongly shaped by financial challenges, physical limitations, and reliance on

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family or community support. Many reported that the continuous demands of treatment, combined with economic pressure, created ongoing emotional strain. These findings suggest that diabetes care should move beyond simply instructing patients on behavioural changes. Improving access to affordable treatment, strengthening social support, and integrating psychosocial care into routine services may help reduce the burden experienced by patients.

## Background

Diabetes remains a major global cause of morbidity and mortality. In 2024, diabetes affected 11.11% of the global adult population, corresponding to approximately 589 million adults, and is projected to rise to 12.96% (853 million individuals aged 20–79 years) by 2050 (1). Type 2 diabetes mellitus (T2DM) accounts for approximately 90–95% of all diabetes cases worldwide and contributes substantially to disability and premature mortality, particularly when glycaemic control is suboptimal (2, 3). In Africa, the burden of T2DM is rising rapidly due to urbanisation, lifestyle changes, and limited health system capacity. A significant proportion of cases remain undiagnosed, thereby increasing the risk of complications at presentation (4). Nigeria bears a substantial share of this burden, with a pooled national prevalence of approximately 7.0%, translating into millions of affected adults (5). As prevalence increases, so too does the psychosocial burden associated with living with a chronic, lifelong condition requiring daily behavioural regulation.

Effective management of T2DM extends beyond pharmacological treatment and routine clinical monitoring. Long-term outcomes depend heavily on sustained self-care management behaviours, including dietary regulation, physical activity, medication adherence, blood glucose monitoring, foot care, and risk-reduction practices (6). However, maintaining these behaviours requires continuous cognitive effort, lifestyle adjustments, and personal discipline, often within environments constrained by financial limitations, sociocultural expectations, and limited health literacy. Nigerian hospital-based studies report suboptimal self-care practices and inconsistencies in diabetes self-management education, suggesting that many patients struggle to implement recommended behaviours consistently (7). Furthermore, medication-related discrepancies and treatment misalignment have been documented in tertiary-care settings in Southwest Nigeria, including Abeokuta, indicating structural and communication-related barriers to effective self-management (8).

Beyond behavioural challenges, living with T2DM is frequently accompanied by diabetes-related distress—a condition-specific emotional response characterised by frustration, worry, burnout, fear of complications, and feelings of failure associated with disease management demands (9, 10). Diabetes-related distress differs from clinical depression; it arises specifically from the ongoing burden of diabetes self-management and has been shown to negatively influence self-care adherence and glycaemic outcomes (3, 9). Persistent distress may undermine motivation, reduce treatment engagement, and create a cyclical pattern wherein poor self-care increases distress, and distress further impairs self-care capacity.

Despite growing recognition of diabetes-related distress globally, Nigerian research has focused mainly on quantitative assessments of knowledge levels, adherence rates, and clinical indicators, with limited exploration of the subjective emotional experiences that accompany self-care demands. While some studies acknowledge psychosocial factors, few have qualitatively examined how patients experience, interpret, and negotiate the emotional burden associated with daily diabetes management within specific sociocultural contexts (11). This represents a significant knowledge gap, as distress is inherently experiential and context-dependent, requiring in-depth inquiry to understand its origins, meanings, and behavioural consequences.

Moreover, there is limited context-specific qualitative evidence from teaching hospitals in Ogun State, major referral centres that manage complex diabetes cases, regarding how patients simultaneously navigate self-care responsibilities and emotional distress within tertiary healthcare environments. Without understanding how patients perceive the demands of self-care, how distress manifests in their daily lives, and how institutional and social environments shape these experiences, interventions risk remaining biomedical, compliance-oriented, and insufficiently responsive to patients' lived realities.

Therefore, there is a critical need to explore the lived experiences of self-care management and diabetes-related distress among patients with T2DM in teaching hospitals in Ogun State. Generating rich, contextually grounded insights into how patients understand, enact, and emotionally respond to self-care demands will inform the development of psychosocially sensitive, patient-centred interventions to improve both behavioural adherence and emotional well-being.

## Materials and Methods

### *Research Design*

This study employed a phenomenological research design to explore patients' lived experiences and perspectives on Type 2 Diabetes Mellitus (T2DM), particularly regarding self-care management and diabetes-related distress. A phenomenological approach was selected because it enables in-depth exploration of individuals' subjective experiences, emotions, and the meanings they attach to living with a chronic condition, insights that cannot be fully captured through quantitative methods (12). This design facilitated a rich understanding of how individuals live with T2DM, the self-care strategies they adopt, and the emotional challenges they encounter in managing their condition.

### *Research Settings*

This study was conducted at Olabisi Onabanjo University Teaching Hospital (OOUTH), Sagamu, and Babcock University Teaching Hospital (BUTH), Ilishan-Remo, both tertiary healthcare institutions located in Ogun State, Southwest Nigeria.

Babcock University Teaching Hospital (BUTH) is a 200-bed tertiary referral centre serving patients from the Remo Local Government Area and surrounding communities in Southwest Nigeria. The hospital houses an Endocrinology, Diabetes, and Metabolism (EDM) unit that provides specialised outpatient and inpatient services for individuals living with diabetes mellitus. As a major referral centre, BUTH manages both newly diagnosed and long-standing cases of Type 2 Diabetes Mellitus (T2DM), including patients with complex disease presentations.

Olabisi Onabanjo University Teaching Hospital (OOUTH), established in 1986 in Sagamu, is a 250-bed tertiary institution serving an estimated population of approximately three million people. The hospital provides comprehensive specialist services and functions as a training and research centre accredited by national medical regulatory bodies. Its Department of Medicine includes an Endocrinology and Metabolism unit and a purpose-built Dame Adebutu Diabetes Care Centre, which offers structured diabetes management, education, and follow-up care.

These hospitals were selected because they are major referral centres for diabetes care within Ogun State and manage a large and diverse population of patients with T2DM. Their established diabetes clinics and specialist services provide an appropriate context for exploring the lived experiences of self-care management and diabetes-related distress among patients receiving tertiary-level care.

### *Study Population*

The study population comprised adults living with Type 2 Diabetes Mellitus (T2DM) who attended the diabetes clinics of Olabisi Onabanjo University Teaching Hospital (OOUTH), Sagamu, and Babcock University Teaching Hospital (BUTH), Ilishan-Remo, Ogun State. Clinic registers in the two sites indicate an active population of approximately 260 adults receiving follow-up care for T2DM during the study period.

### *Inclusion criteria*

Patients aged 18 years and above.

All patients diagnosed with type 2 diabetes for at least 3 months.

Participants were required to be willing and able to provide written informed consent to participate in the study.

### *Exclusion criteria*

Patients who are chronically ill and admitted to the hospital.

Type 1 Diabetes or another type of diabetes (other than T2DM)

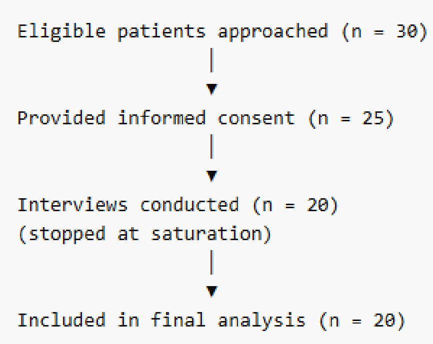
All patients with hyperglycaemia resulting from Gestational Diabetes Mellitus, Cushing syndrome, and paraneoplastic syndrome are excluded from the study

### *Sample Size and Sampling Technique*

At the time of the study, the diabetes clinics in the two teaching hospitals had approximately 260 registered patients with Type 2 Diabetes Mellitus (T2DM), which formed the sampling frame. Purposive sampling was used to recruit participants who met the inclusion criteria. With assistance from clinic staff, 30 eligible patients were approached, of whom 25 provided written informed consent. Purposive sampling was appropriate for this hermeneutic phenomenological study because the aim was to obtain rich experiential accounts rather than statistical representation. Participants were intentionally selected to capture variation in sex, age (46–76 years), duration of diabetes (5–20 years), and educational background across the two sites, thereby approximating maximum variation within the clinic population.

Interviews were conducted in a quiet private space within the clinics, and data collection and analysis proceeded concurrently. During iterative analysis, the research team noted that by the 18th interview, no new meaning units or interpretive codes were emerging. Interviews 19 and 20 confirmed analytic redundancy. Using this iterative stopping criterion, data saturation was considered achieved at interview 20, and further interviewing of the remaining consented participants was not required. The final analytic sample, therefore, comprised 20 participants (See Figure 1).

Reflexive bracketing and analytic memoing were maintained throughout to support interpretive rigour.



```
Eligible patients approached (n = 30)
                |
                ▼
Provided informed consent (n = 25)
                |
                ▼
Interviews conducted (n = 20)
(stopped at saturation)
                |
                ▼
Included in final analysis (n = 20)
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**Figure 1: Flow diagram of participant recruitment and inclusion**

*Instrument for Data Collection*

Data were collected through in-depth semi-structured interviews, which allowed participants to describe their experiences in their own words while ensuring key areas relevant to the study were addressed. The semi-structured format allowed participants to guide the conversation toward personally meaningful issues, while maintaining focus on the study objectives. An interview guide was developed following an extensive review of relevant literature and consultation with subject experts to ensure content relevance and adequacy. It consisted of open-ended questions designed to encourage detailed narratives about self-care management and diabetes-related distress.

Interviews were conducted in a quiet and comfortable setting within the hospital to promote openness and ease of communication. Each session lasted approximately 40 minutes, allowing sufficient time for participants to reflect on and articulate their experiences. Before participation, the study's purpose was explained, and written informed consent was obtained. With participants' permission, all interviews were audio-recorded to ensure accurate capture of their accounts and to support verbatim transcription.

In addition to audio recording, observational field notes were documented immediately after each interview. These notes captured contextual details, such as participants' nonverbal expressions, emotional tone, pauses, and general interaction dynamics, that could not be fully conveyed by audio recordings alone. The integration of verbatim transcripts and field notes enhanced data richness and supported a more nuanced interpretation of participants' experiences of self-care management and diabetes-related distress. This study is reported in accordance with the Consolidated Criteria for Reporting Qualitative Research (COREQ). The completed checklist is provided as Supplementary File 1.

*Reflexivity and Researcher Positionality*

Reflexivity was maintained throughout the study to enhance interpretive transparency and to ensure that the researcher remained aware of how personal and professional perspectives might shape the research process. The researcher who conducted the interviews is a male nurse-researcher (RN, MSc) with clinical experience in adult health care and formal training in qualitative research methods. Given this background, there was potential for prior assumptions regarding diabetes management and patient behaviour. To address this, the researcher engaged in bracketing before data collection through written reflexive journaling, documenting initial assumptions and expectations to remain open to participants' meanings.

The researcher had no prior therapeutic relationship with any of the participants before recruitment. During the interviews, a conversational and non-judgemental approach was adopted to encourage participants to describe their experiences in their own words and from their own perspectives. Most interviews were conducted in English; however, two participants preferred Yoruba and were therefore interviewed in Yoruba. The researcher is fluent in both languages, which supported an accurate understanding and interpretation of participants' narratives.

Reflexive notes were written after each interview to document emerging impressions, emotional responses, and potential sources of bias. These reflections were revisited during the analytic process to ensure that interpretations remained grounded in participants' accounts rather than the researcher's preconceptions. Regular peer debriefing with the research supervisors further supported critical examination of the developing interpretations and analytic decisions.

Reflexive memo-writing also informed the refinement of the coding process. For example, early analytic notes initially framed participants' accounts of medication-taking as "non-adherence." However, closer engagement with participants' narratives revealed that these behaviours often reflected constrained choices shaped by financial hardship, physical discomfort, and treatment burden. Through reflexive discussion and review of the transcripts, the analytic label was therefore revised to "medication as obligation and endurance," a formulation that more accurately captured the lived experience of participants managing treatment within structural and bodily limitations.

### *Enhancing Trustworthiness of the Study*

Ensuring rigour in interpretive phenomenological studies requires attention to both procedural accuracy and the credibility of interpretive processes. The interview guide was pilot-tested to refine question clarity, flow, and contextual relevance before data collection. The pre-test enabled the identification of ambiguities, assessed the feasibility of interview procedures, and ensured that prompts were sufficiently open-ended to facilitate rich, reflective accounts. In keeping with hermeneutic phenomenology, transcripts were not returned to participants for verification. This approach recognises interpretation as a co-constructed process between researcher and participant rather than a purely descriptive account. Instead, credibility was strengthened through reflective summarising during interviews, peer debriefing, and prolonged engagement with the data.

In addition, trustworthiness was guided by Lincoln and Guba's (13) framework of credibility, transferability, dependability, and confirmability. However, consistent with hermeneutic phenomenology, these criteria were applied within an interpretive paradigm that acknowledges the co-construction of meaning between researcher and participants.

### *Credibility*

In interpretive phenomenology, credibility rests on the depth, resonance, and plausibility of interpretations rather than on claims of objective truth. Credibility was strengthened through prolonged engagement with participants and sustained immersion in the data. Interviews were conducted in a manner that encouraged reflective dialogue, allowing participants to elaborate on their lived experiences of self-care and diabetes-related distress. The researcher employed probing and clarifying questions to deepen understanding and ensure interpretive accuracy. Member engagement occurred during interviews through reflective summarising, during which participants were invited to clarify or expand on emerging meanings.

Additionally, methodological triangulation was achieved through the integration of verbatim transcripts and detailed field notes documenting non-verbal expressions, emotional tone, and contextual nuances. Rather than seeking neutrality, the researcher maintained reflexive awareness of how prior clinical and academic experiences shaped interpretive processes. This reflexive stance enhanced the credibility of thematic constructions.

### *Transferability*

In interpretive phenomenology, transferability is facilitated by thick description rather than statistical generalisation. The researchers provided detailed contextual accounts of the study setting, participant demographics, healthcare environment, and socio-economic realities to situate the findings within their lived world. By offering comprehensive descriptions of the relational and structural contexts influencing participants' experiences, readers can determine the applicability of the findings to similar tertiary care settings or resource-constrained environments.

### *Dependability*

Dependability was ensured through systematic documentation of the research process. An audit trail was maintained throughout the study, including records of interview development, reflexive notes, analytic memos, thematic evolution, and decision-making processes. The hermeneutic analytic process involved iterative movement between individual transcripts and the emerging thematic whole, consistent with the hermeneutic circle. Peer debriefing sessions with supervisors and qualitative research experts provided opportunities to examine interpretive decisions and enhance analytic coherence. These procedures ensured that findings were not arbitrary but grounded in sustained engagement with the data.

### *Confirmability*

In interpretive phenomenology, confirmability does not imply researcher detachment but reflexive accountability. A reflexive journal was maintained throughout the study to document pre-understandings, emerging insights, emotional responses, and evolving interpretations. This process enabled ongoing examination of how the researcher's positionality informed meaning-making. Emerging themes were discussed critically during supervisory meetings to ensure that interpretations remained closely connected to participants' narratives. Through reflexive engagement and peer interrogation, the findings were anchored in participants' lived experiences while acknowledging the researcher's interpretive role.

### *Method of Data Analysis*

Data analysis was conducted concurrently with data collection and was informed by Heideggerian hermeneutics and van Manen's phenomenological orientation (14, 15). All interviews were audio-recorded and transcribed verbatim. Transcripts were checked against the recordings for accuracy, anonymised, and assigned participant identifiers (P1–P20). Interviews were conducted primarily in English; however, two participants preferred Yoruba and were interviewed in Yoruba. The Yoruba interviews were translated into English during transcription by the bilingual first author. To enhance translation accuracy, selected segments of the Yoruba transcripts were reviewed by a second bilingual colleague familiar with qualitative research to ensure that the English translations preserved the original meanings and contextual nuances.

Consistent with the hermeneutic circle, analysis involved sustained movement between parts of the text (individual statements and narratives) and the evolving understanding of the whole dataset (15). Transcripts were read repeatedly to achieve immersion, after which meaning units relevant to participants' experiences of self-care and diabetes-related distress were identified and interpretively coded. Data management and coding were undertaken manually using organised transcript files and coding tables in Microsoft Word, and Excel to enhance transparency and traceability.

Initial coding and thematic development were undertaken by the first author, who served as the primary analyst. To strengthen analytic dependability, two experienced qualitative researchers independently reviewed the evolving coding framework and thematic interpretations. A subset of transcripts (approximately 25%) was examined during this stage to assess the consistency of interpretation. Any differences in coding or interpretation were discussed during analytic meetings and resolved through consensus, with reference to the original transcripts. Because the study followed a hermeneutic phenomenological approach, formal inter-coder reliability statistics were not calculated. Instead, emphasis was placed on interpretive dialogue and reflexive engagement with the data.

Methodological rigour was further supported through ongoing reflexive journaling, maintenance of an audit trail documenting analytic decisions, and adherence to the Consolidated Criteria for Reporting Qualitative Research (COREQ) guidelines. A completed COREQ checklist is provided as supplementary material (Supplementary File 1).

### *Stages of Data Analysis*

The first step involves immersion and holistic reading. During this stage, each transcript was read repeatedly to gain an overall sense of how participants experienced living with Type 2 Diabetes Mellitus (T2DM), particularly in relation to self-care management and diabetes-related distress. Reflexive notes were written to capture early interpretive impressions.

The second step encompasses the identification of meaning units. During this phase, the researcher examined the transcripts line by line to identify meaning units; phrases or passages that conveyed a distinct experience related to monitoring, medication use, dietary practices, physical activity, financial strain, relational support, or emotional burden. Care was taken to preserve the context in which each experience was expressed.

In addition, the third step, which involves interpretive coding, was commenced. Meaning units were condensed and assigned interpretive codes that reflected the essence of participants' accounts (for example, morning glucose monitoring as routine vigilance, medication as unavoidable obligation, exercise limited by arthritis, dietary restriction as emotional sacrifice, financial difficulty affecting care). Coding was iterative and involved constant movement between individual accounts and the developing whole, consistent with the hermeneutic circle.

The fourth step involves the development of thematic structure. Codes were compared across transcripts and clustered based on shared experiential meaning. Through sustained interpretive engagement with the data, these clusters were synthesised into the two overarching interpretive domains reported in the findings: Structured Self-Care Behaviour Within Structural and Relational Constraints and Diabetes-Related Distress as Cumulative Emotional and Material Burden.

Finally, the last step is the interpretive refinement. During this phase, the emerging domains were refined through analytic memo-writing and repeated return to the original transcripts to ensure that interpretations remained firmly grounded in participants' narratives and reflected the depth and nuance of their lived experiences.

However, to enhance analytic transparency, an example of the coding pathway derived directly from the data is presented below:

Raw meaning unit: "I usually cook a soup that lasts 2 to 3 days, but now it lasts for more than 7 days due to lack of money." (P4, F, 65 years)

Condensed meaning: Participant stretches food because of a lack of money

Interpretive code: *Financial constraint affecting daily diabetes management*

Overarching domain: Diabetes-Related Distress as Cumulative Emotional and Material Burden

Participant recruitment was conducted between 4 January and 13 January 2023, while interviews took place from 18 January to 8 February 2023. Eligible participants received both verbal and written explanations of the study purpose, procedures, potential risks, and their rights as participants. Written informed consent was obtained prior to participation, including permission for audio recording and the use of anonymised quotations in research reports and publications. Participation was entirely voluntary, and participants were informed of their right to withdraw at any time without any effect on their clinical care. All interviews were audio-recorded with participants' permission and transcribed verbatim. Identifying details were removed during transcription, and each participant was assigned a unique study code (P1–P20) to ensure confidentiality. Audio recordings and transcripts were stored on a password-protected computer accessible only to the research team. Study data will be securely retained for five years in line with institutional research governance requirements and will thereafter be permanently deleted. A codebook excerpt and coding tree are provided in Supplementary File 2.

## Results

### *Sociodemographic Characteristics*

This section presents the interpretive findings from in-depth interviews conducted with 20 patients diagnosed with Type 2 Diabetes Mellitus (T2DM) attending two teaching hospitals in Ogun State. Twenty participants aged 46–76 years (mean 58.4 ± 8.7) were interviewed. Most were female (80%). Duration of diabetes ranged from 5 to 20 years (mean 8.0 ± 3.9), with the majority living with the condition for less than 10 years. Half of the participants had secondary education. Full sociodemographic details are highlighted in Supplementary File 3.

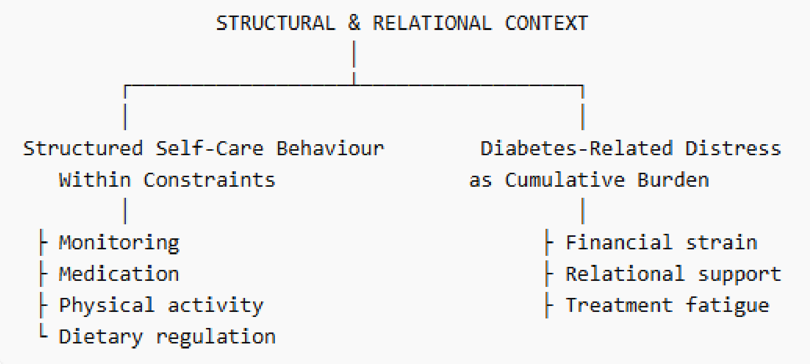
**Table 1. Sociodemographic and Clinical Characteristics of Participants (N = 20)**

| Variable | Category | n (%) / Summary |
|---|---|---|
| Age (years) | Mean ± SD | 58.4 ± 8.7 |
| | Range | 46–76 |
| Age group | 45–54 | 8 (40.0) |
| | 55–64 | 7 (35.0) |
| | ≥65 | 5 (25.0) |
| Sex | Female | 16 (80.0) |
| | Male | 4 (20.0) |
| Duration of T2DM (years) | Mean ± SD | 8.0 ± 3.9 |
| | Range | 5–20 |
| Duration group | 5–9 | 13 (65.0) |
| | 10–14 | 6 (30.0) |
| | ≥15 | 1 (5.0) |
| Highest Level of Education | Primary | 2 (10.0) |
| | Secondary | 10 (50.0) |
| | Tertiary | 8 (40.0) |

SD = Standard Deviation; N = 20; % = Percentage.

### Experiences of Patients with Type 2 Diabetes Mellitus Regarding Self-Care Management and Diabetes-Related Distress

Analysis followed a hermeneutic-phenomenological approach, involving an iterative movement between individual narratives and the emerging whole. The findings are organised into two overarching interpretive domains: Structured Self-Care Behaviour Within Structural and Relational Constraints and Diabetes-Related Distress as Cumulative Emotional and Material Burden. These domains reflect the intertwined nature of behavioural management and lived distress (Figure 2).



```
                STRUCTURAL & RELATIONAL CONTEXT
                               |
          ┌────────────────────┴────────────────────┐
          |                                         |
Structured Self-Care Behaviour          Diabetes-Related Distress
   Within Constraints                     as Cumulative Burden
          |                                         |
 ├ Monitoring                                ├ Financial strain
 ├ Medication                                ├ Relational support
 ├ Physical activity                         ├ Treatment fatigue
 └ Dietary regulation
```

**Figure 2: Interpretive map of self-care behaviour and diabetes-related distress among adults with T2DM**

#### *Structured Self-Care Behaviour Within Structural and Relational Constraints*

Participants described self-care management as a highly structured, routinised set of behaviours involving glucose monitoring, medication adherence, dietary regulation, and physical activity. However, these behaviours were not experienced as purely autonomous choices; rather, they were enacted within financial limitations, bodily constraints, and relational dependencies.

#### *Monitoring as Daily Surveillance Under Financial Limitation*

Blood glucose monitoring emerged as a disciplined form of daily surveillance that helped structure routine decisions, although its consistent practice was frequently shaped, and sometimes disrupted, by financial and material constraints. For instance, blood glucose monitoring was widely perceived as a necessary routine, particularly in the mornings, to guide daily decisions. One participant stated, "I check my blood sugar level twice a day - in the morning and at night. Though the night blood sugar check is not constant, the morning is constant to plan my meal…" (P2, male, 60 years). This account reflects self-monitoring as structured vigilance. However, monitoring practices were frequently disrupted by economic challenges and equipment malfunctions. A participant noted, "I bought a glucometer machine to monitor my blood sugar regularly, but the machine is faulty now…" (P4, F, 65 years). Others relied on social networks, as one participant stated, "I used to check my BP and blood sugar level in one of my church members' houses who has the machines…" (P5, F, 53 years). These narratives suggest that while monitoring is internalised as responsibility, its execution remains contingent upon material and relational resources.

#### *Medication as Obligation and Endurance*

Medication adherence emerged as essential, yet often experienced as a burdensome obligation that participants endured to maintain stability. The participants frequently framed the use of medication not as an empowered choice but as an inevitability. One of the participants stated, "I do not have other choices, so I take my insulin and use other drugs as prescribed…" (P2, M, 60 years). This framing reflects compliance rooted in necessity rather than collaborative agency.

Financial barriers and side effects further complicated adherence. Some participants reported temporary shifts toward herbal remedies when conventional medications were unaffordable: "Initially I was using an Ijebu drug… but it usually lowers my blood sugar drastically… Now, I am using the prescribed orthodox drugs" (P8, F, 72 years). Furthermore, injection-related discomfort also contributed to treatment fatigue, as one participant stated, "Taking my injection and medication is burdensome… The injection site is painful too…" (P3, F, 55 years). Medication thus emerged as both life-sustaining and physically and emotionally taxing.

### *Physical Activity Within Bodily and Occupational Constraints*

Engagement in physical activity emerged as uneven and context-dependent, with participants negotiating exercise within the realities of their occupational routines and coexisting bodily limitations. Participants recognised the benefits of physical activity but incorporated it unevenly into daily life. For some, activity was embedded within occupational routines, as one participant noted, "I am a farmer and most of the time I trek to my farm…" (P5, F, 53 years). Others adopted deliberate exercise practices, as one of the participants said: "I have a bicycle that I ride at home to exercise myself…" (P2, M, 60 years).

However, comorbid conditions such as arthritis restricted engagement in exercise practice in some participants. One participant stated, "…but I don't do sports because of the arthritis that I have." (P8, F, 72 years). Physical activity was therefore experienced not as a uniform practice but as mediated by bodily capacity and daily demands.

### *Dietary Regulation as Discipline and Restriction*

Dietary management emerged as a widely practised form of disciplined self-control, yet participants' narratives also revealed the emotional weight and sense of deprivation that often accompanied these restrictions. Some participants viewed dietary control as central to self-care and often described it as adherence to professional guidance. One of the participants stated, "I eat those foods that I was told to eat and avoid others…" (P2, M, 60 years). However, dietary regulation was also experienced as an emotional sacrifice. One participant stated, "Sometimes I get depressed… not eating what I want…" (P18, F, 48 years). However, some participants adopted moderation rather than strict avoidance, as one participant noted, "I do not avoid any food… but I don't eat them much…" (P1, F, 55 years). Diet thus reflected both compliance and a sense of loss, contributing to the emotional weight of living with T2DM.

### *Diabetes-Related Distress as Cumulative Emotional and Material Burden*

All participants described experiencing some form of distress associated with diabetes management. Distress manifested financially, physically, relationally, and psychologically, often accumulating over time.

### Financial Strain as a Persistent Stressor

Financial pressure emerged repeatedly as a pervasive undercurrent in participants' stories, shaping both the practical execution of self-care and the emotional tone of living with T2DM. Some participants experienced financial hardship that influenced both their behaviour and emotional well-being. One of the participants stated, "There is nothing that I can do without money…" (P1, F, 55 years). One participant described stretching limited food resources, "I usually cook a soup that lasts 2 to 3 days, but now it lasts for more than 7 days due to lack of money" (P4, F, 65 years). Financial insecurity directly affected medication purchase, dietary adherence, and clinic attendance, intensifying distress.

### Relational Support as Buffer and Vulnerability

Social relationships emerged as both protective buffers that eased daily management and fragile supports that, when absent, intensified vulnerability. For instance, social support significantly shaped some participants' experiences, as those with spousal or family assistance described greater stability. One participant said, "My wife is aware of my condition, and she has been supportive…" (P19, M, 54 years). Conversely, loss of spousal support or financial strain within families intensified vulnerability, as evidenced by another participant who stated, "I do not have a strong support system ever since I lost my husband…" (P1, F, 55 years). Support systems functioned as both protective and fragile structures within participants' lived worlds.

### *Treatment Burden and Emotional Fatigue*

The continuous demands of self-care behaviours (monitoring, medication, and dietary vigilance) over time emerged as a form of emotional fatigue that many participants described as an enduring aspect of living with T2DM. Some participants described cumulative exhaustion from ongoing self-care management tasks. One participant stated, "Checking of my blood sugar and giving myself an injection is stress for me…" (P2, M, 60 years). Also, among the study participants, psychological distress manifested as mood instability and depressive feelings, as one participant noted, "Sometimes I get depressed with taking my drugs, checking my sugar levels and not eating what I want…" (P18, F, 48 years). These accounts reflect distress as more than episodic emotion; instead, it appears as a sustained and cumulative aspect of living with T2DM.

Although financial strain featured prominently across accounts, a small number of participants described more stable access to medications and monitoring support through family assistance, which reduced day-to-day disruption. These participants still reported the workload of self-care, but framed it as a manageable routine rather than a persistent strain. This contrast underscores how material security and reliable relational support can reshape the lived burden of diabetes management.

## Discussion

This study explored the lived experiences of self-care management and diabetes-related distress among patients with Type 2 Diabetes Mellitus (T2DM) attending tertiary hospitals in Ogun State, Nigeria. The findings indicate that self-care is experienced as a structured behavioural discipline enacted within socioeconomic and relational constraints, while diabetes-related distress emerges as a cumulative emotional and material burden.

Participants described glucose monitoring as a routine form of daily vigilance—particularly morning checks used to "plan my meal." However, the narratives make clear that monitoring was not simply a matter of individual motivation. Faulty devices, limited testing supplies, and reliance on church members' equipment illustrate how routine surveillance is materially contingent. This interpretation is consistent with evidence from low-resource settings showing that access to essential diabetes supplies remains uneven and frequently interrupted, thereby shaping self-care capacity even when patient motivation is high (2, 16). Importantly, participants' accounts of borrowing equipment highlight monitoring as a relationally supported practice. Similar observations in African settings suggest that informal networks can partially compensate for weak formal access, although such arrangements remain inherently fragile (17).

Medication-taking was widely framed as necessary but burdensome. The statement "I do not have other choices" reflects adherence grounded more in obligation than in a sense of collaborative therapeutic agency. This pattern aligns with Nigerian evidence indicating that diabetes care often remains strongly biomedical and provider-directed, with limited emphasis on shared decision-making (18). Participants also described financial pressure and medication side effects as drivers of treatment strain and occasional shifts to alternative remedies. Rather than simple non-adherence, these patterns are better understood as adaptive responses to constrained circumstances. This interpretation is supported by broader policy evidence showing that high out-of-pocket payments and weak financial protection mechanisms in sub-Saharan Africa frequently disrupt continuity of chronic disease treatment (19). Participants' descriptions of injection pain and the use of the term "stress" further illuminate the experiential weight of treatment burden. Contemporary scholarship conceptualises treatment burden as the cumulative workload imposed by chronic illness care, which may exceed patients' coping capacity over time (20). The present findings reinforce this perspective by showing how daily regimens become physically uncomfortable and emotionally draining, positioning medication as simultaneously life-sustaining and taxing.

Although many participants experienced self-management as demanding, some accounts reflected more adaptive integration of physical activity into everyday life. Engagement varied: for some, activity was embedded in occupational routines such as farming; others adopted intentional exercise strategies; and some were limited by comorbid conditions such as arthritis. These variations do not contradict the broader interpretive pattern but instead illustrate the spectrum of adjustment within shared structural constraints. Current guidance similarly emphasises that physical activity recommendations must be tailored for older adults and individuals with functional limitations rather than applied uniformly (21). The present findings therefore suggest that exercise behaviour is shaped not only by motivation but also by bodily capacity and occupational realities.

Dietary regulation emerged as central to self-care and was often described as compliance with professional advice. At the same time, participants expressed sadness and frustration linked to restriction and loss. This dual experience echoes regional evidence indicating that while diabetes self-management programmes may improve clinical indicators, their day-to-day acceptability can be challenging when recommendations conflict with lived realities (22). Notably, some participants adopted moderation rather than strict avoidance, suggesting pragmatic adaptation to cultural food practices and household constraints. This supports growing calls within the African literature for diabetes education approaches that are culturally grounded and socioeconomically feasible (22). Within this context, dietary regulation in the present study functioned both as disciplined self-care and as an emotionally charged reminder of loss.

Financial strain emerged as a pervasive influence on both behavioural adherence and emotional well-being. Participants described difficulty purchasing medications, monitoring supplies, and recommended foods, with one noting, "There is nothing that I can do without money." These accounts are consistent with evidence that out-of-pocket expenditure remains a major barrier to diabetes management in sub-Saharan Africa (23, 24). In Nigeria, diabetes care is frequently financed through household resources, and medication costs constitute a substantial proportion of direct medical spending (23, 25). The present findings extend this literature by illustrating how financial pressure is experienced in everyday life, for example, stretching food over several days. and how such adjustments accumulate into ongoing psychological strain. From an interpretive standpoint, the data suggest that financial insecurity is deeply entangled with how diabetes-related distress is experienced and managed.

Relational support operated in two contrasting ways within participants' accounts. Supportive spouses and family members provided important stabilising resources, whereas bereavement or fragile household finances intensified vulnerability. Prior West African studies similarly demonstrate positive associations between social support and diabetes outcomes (17). However, the present findings underscore that such support is contingent rather than guaranteed. This highlights the potential limitations of interventions that implicitly assume the availability of reliable family support.

Finally, participants described persistent exhaustion associated with the continuous demands of monitoring, medication, and dietary vigilance. This aligns with emerging African evidence documenting a substantial burden of diabetes-related distress and calling for greater integration of psychosocial care into routine diabetes services (26). The findings also resonate with treatment-burden research showing that the cumulative workload of diabetes care can produce sustained emotional fatigue, particularly when tasks are repetitive, painful, and financially demanding (20). In this study, the "stress" described by participants reflects the lived cost of maintaining long-term survival work under constraint.

### Strengths and Limitations

A key strength of this study lies in the use of an interpretive phenomenological approach, which enabled a nuanced exploration of how self-care and diabetes-related distress are experienced in everyday life. The inclusion of participants across a wide age range, differing educational backgrounds, and varying durations of diabetes enhanced the analytic depth and breadth of the findings.

Several limitations should be considered when interpreting the results. First, participants were recruited from tertiary teaching hospitals, which may introduce referral and care-engagement bias. Individuals attending specialist clinics are typically more connected to formal healthcare services and may differ in important ways from those managed solely in primary or community settings. As such, the findings should be interpreted cautiously when considering transferability to less-resourced contexts.

Second, the sample was predominantly female (16 of 20 participants). While this distribution reflected clinic attendance patterns during the recruitment period, it may have limited the depth of insight into male experiences of diabetes self-management and distress. Although the narratives did not indicate fundamentally different experiential structures between men and women, more subtle gendered differences in help-seeking behaviour, support mobilisation, or emotional expression may not have been fully captured.

Finally, interviews were conducted at a single time point. The study, therefore, does not capture how experiences of self-care and distress may evolve over the longer trajectory of living with T2DM. Future longitudinal qualitative work could provide additional insight into these temporal dynamics. Despite these limitations, the inclusion of participants with varied demographic and illness characteristics supports the analytic transferability of the experiential insights generated.

### Implications for Practice and Policy

The findings highlight the need for diabetes care models in Nigeria and similar settings to move beyond purely behavioural messaging toward more context-sensitive support. Interventions that improve affordable access to monitoring supplies and medications, integrate psychosocial assessment into routine care, and provide culturally grounded dietary guidance may help reduce treatment burden. Policies that strengthen financial protection for chronic disease management are also likely to have meaningful downstream effects on patients' lived experience of diabetes.

## Conclusion

Self-care among adults living with T2DM in this setting is not simply a matter of individual discipline but is negotiated within intersecting financial, bodily, and relational constraints. Diabetes-related distress emerges cumulatively from the ongoing work required to sustain treatment under these conditions. Strengthening affordable access to care resources and embedding psychosocial support within diabetes services may help reduce the everyday burden experienced by patients.

## List of Abbreviations

BUHREC: Babcock University Health Research Ethics Committee
BUTH: Babcock University Teaching Hospital
DM: Diabetes Mellitus
DRD: Diabetes-Related Distress
OOUTH: Olabisi Onabanjo University Teaching Hospital
OOUTH-REC: Olabisi Onabanjo University Teaching Hospital Health Research
T2DM: Type 2 Diabetes Mellitus

## Declarations

*Ethical Considerations and consent to participate*

Ethical approval for the study was obtained from the Babcock University Health Research Ethics Committee (BUHREC) (Approval No. BUHREC66722, dated July 25, 2022) and the Olabisi Onabanjo University Teaching Hospital Health Research and Ethics Committee (OOUTH/HREC) (Approval No. OOUTH/HREC/557/2022AP, dated December 28, 2022). Informed consent was obtained from each of the participants, and confidentiality was assured.

*Consent for Publication*

All the authors gave consent for the publication of the work.

*Availability of Data and Materials*

The qualitative interview transcripts are not publicly available due to the sensitive nature of the data and the need to protect participant confidentiality. Anonymised excerpts, the coding tree/codebook excerpt, and supporting analytic materials may be made available by the corresponding author upon reasonable request and subject to approval by the relevant ethics committees.

*Conflict of Interests*

The authors have no conflict of interest to declare.

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*Author Contributions*

ACCC, OF: Study conception and design, Data analysis and interpretation and Critical revision of the article.
ACCC, AET: Data collection
ACCC, OF, AAQ: Drafting of the article

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