

Life in Every Dose - The Lived Experiences of Diabetes Mellitus Patients on Insulin Therapy

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Abstract

Living with diabetes under insulin therapy reflects profound resilience. This qualitative phenomenological study explored the lived experiences of ten Diabetes Mellitus patients in Barangay Poro, San Fernando City, La Union. Participants were purposively selected based on criteria including age (18–65), insulin use for at least six months, and informed consent. Data were gathered through semi-structured, open-ended interviews, recorded with permission and supplemented by field notes. Trustworthiness was ensured through prolonged engagement, triangulation, member checking, and audit trails. Ethical standards, including autonomy, beneficence, confidentiality, and justice were strictly followed. Participants shared emotional distress, financial strain, stigma, missed doses, hypoglycemia, and altered self-image. Despite these, many adapted through lifestyle changes and support from family and healthcare providers. The study recommends enhanced diabetes education, mental health support, financial aid, and a stable insulin supply. Community-based interventions such as barangay forums, home visits, and mobile clinics are essential to improving outcomes and supporting patients on insulin therapy.

Keywords: Lived Experience, Diabetes Mellitus, Insulin Therapy, Patient, Dosage

1. Introduction

"Insulin is not a cure for diabetes; it is a treatment that allows life to continue," as remarked by Sir Frederick Banting who is the co-discoverer of insulin and emphasized its transformative role in diabetes management. While insulin therapy is a lifeline that enables people to manage their health and to avoid life-threatening complications, it is also a journey filled with challenges. The experience of managing diabetes over insulin therapy extends further than medical concerns. Diabetes mellitus - a chronic illness that demands continuous management, and insulin therapy is necessary to controlling blood glucose levels. And yet, the burdens extend beyond biological management that has encompassed psychological, emotional, financial, and other struggles that are usually overlooked in existing researches found in marginalized communities. The phrase "Life in every dose" reflects insulin's pivotal role, not just as a medication, but as a tool for sustaining life and fostering hope amidst adversity.

Diabetes mellitus, as defined by the World Health Organization, is a chronic metabolic condition marked by elevated levels of blood glucose caused by abnormalities in insulin synthesis or action, leading to serious damages in the body. This chronic condition, primarily categorized into Type 1 and Type 2 diabetes, has evolved from being a complex metabolic disorder to a pressing global health crisis (WHO, 2024). This can be seen in the 2021 report by the IDF, which states that 537 million people—10.5% of the global population—live with diabetes. By 2045, projections suggest that number will rise to 783 million, with healthcare costs surpassing \$1.05 trillion, and nearly 50% of those with diabetes are unaware of their condition, and Southeast Asia, the Western Pacific, and Africa face the highest rates of undiagnosed cases (Hossain, M. J., et al., 2024).

In the Philippines, diabetes is a growing public health concern, with over 8,500 registered cases in La Union alone (Austria, 2024). In San Fernando City, La Union, there are a total of 2,529 documented cases of diabetes mellitus (DM), with the highest recorded cases in barangays such as Catbangan (307 cases), Sevilla (296 cases), Lingsat (264 cases), Tanqui (205 cases), Pagudpud (197 cases), and Poro (195 cases). Despite this, a total of 120 patients from the 2529 cases of diabetes mellitus patients are reported to be undergoing insulin therapy, with relatively low numbers in these barangays—Sevilla reporting the highest at 14 patients, followed by Poro (13), Catbangan (8), and Pagdalangan Norte (8), emphasizing the need to understand the lived experiences of DM patients reliant on insulin therapy especially in the local communities.

This figure reflects the growing prevalence of diabetes in the province and it also highlights the need for improved access to insulin medication along with other treatments. Whilst the number of diabetes patients increases, it then ensures that insulin availability becomes a priority. The global and national trends of rising diabetes rates, along with the increasing economic burden of the disease, highlight the necessity for better awareness, screening, and management strategies. In regions with limited healthcare infrastructure, like rural areas, overcoming barriers to insulin access is crucial for preventing severe complications such as kidney failure, blindness, and heart disease (ADA, 2021).

Insulin comes in various forms, including injections, pens, and pumps, and is available in different types such as rapid-acting, short-acting, intermediate-acting, and long-acting. These forms help manage blood sugar levels by addressing immediate glucose spikes or providing steady control throughout the day. The main goal of insulin therapy is to maintain blood glucose within a target range, preventing complications such as

hyperglycemia, hypoglycemia, and long-term organ damage. Despite the critical role insulin plays in managing diabetes, its accessibility is increasingly challenged by factors like manufacturing processes, limited competition, and supply chain disturbances. These barriers make insulin very expensive especially in the marginalized communities and rural areas like La Union. Even in more affluent nations, insurance limitations and out-of-pocket expenses create significant obstacles to obtaining insulin which further worsened global health disparities.

The rising costs of insulin further complicated the situation. As insulin prices increase - particularly with the use of expensive insulin analogs, access became more difficult for clients with limited financial resources. For example, a study conducted by Herman and Kuo (2021) highlighted the increased use of expensive insulin analogs that has driven up prices, making it less affordable for patients and healthcare systems alike. This is further supported by a survey found in one RAND study, which found that many diabetic individuals have postponed medical appointments or delayed bill payments to afford their insulin which creates a ripple effect, where the cost of managing diabetes leads to poorer health outcomes and heightened financial stress.

These escalating financial pressures caused by the rising costs of insulin reinforce the need for policy interventions and greater access to affordable insulin. Without targeted interventions, these economic burdens may contribute to severe health inequities and worsen outcomes for diabetic individuals, especially among those in low-income populations who are disproportionately affected by rising healthcare costs (RAND Corporation, 2021). These challenges may further hinder access to insulin which then forced patients to limit their doses or skip their treatment altogether, which can worsen long-term health outcomes (Herman & Kuo, 2021).

However, despite its potential benefits, insulin therapy is undermined by systemic issues which lead to the growing concern over insulin therapy being underutilized in some countries like the Philippines. Such as in one article titled "Direct Medical Costs of Type 2 Diabetes Mellitus in the Philippines" highlights its underutilization in public healthcare facilities, noting that despite its affordability, it accounts for only 0.4% to 1% of medical costs, revealing that it accounts for only a small fraction of medical costs, which may lead to serious long-term health and economic consequences. (Jimeno et al., 2021).

The challenges of diabetes management extend beyond financial barriers as socioeconomic factors can further impede effective insulin management, particularly in marginalized communities. As one article titled "Living with and Managing Type 1 Diabetes in Humanitarian Settings: A Qualitative Synthesis of Lived Experience and Stakeholder Tacit Knowledge" found that limited access to insulin, food insecurity, and inadequate healthcare services severely hinder patients' ability to manage their diabetes. Limited access to insulin due to supply chain issues and costs leads to inconsistent usage, while food insecurity prevents patients from obtaining nutritious meals, forcing them to rely on unhealthy options that worsen glycemic control, and inadequate healthcare services in marginalized communities limit access to essential medical care and diabetes education, resulting in poorer health outcomes (Oria et al., 2024).

Furthermore, from the study "Barriers and Facilitators to Insulin Treatment", it articulated supply shortages, high costs, as well as patients' circumstances as key barriers to insulin therapy. These findings emphasized how concerns such as interferences in pharmaceutical supply chains and insufficient health insurance coverage limits the access

to insulin - especially for disadvantaged populations. To address these conflicts, the study specified the need for reliable pharmaceutical supply strategies along with sizable health insurance coverage, which are critical to ensure the consistency of insulin availability for patients managing diabetes (Bayked et al., 2022).

Socioeconomic problems like supply shortages, financial struggles, limited public access to healthcare, including social stigma also causes notable emotional and psychological stress for individuals, which impacts on the willingness of diabetic patients to seek treatment. This emotional burden is further highlighted in the study "Patients' Lived Experiences of Self-injectable Diabetes Treatment: A Phenomenological Study", where emotional discomfort and fear led many patients to skip doses or avoid check-ups, despite the emphasis on self-management. Effective diabetes management requires more than just medication—it demands a deep understanding of the obstacles the patients face; without addressing these factors, patients may delay treatment, complicating their care (Nuuyoma & Ndara, 2023).

Building on this understanding of emotional challenges, additional research has explored the specific challenges faced by older adults in managing insulin therapy, revealing their unique struggles related to both the physical and emotional demands of treatment. The study titled "A qualitative study of the experiences of insulin use by older people with type 2 diabetes mellitus" explored the lived experiences of older adults managing insulin therapy, this research emphasizes the challenges of older adults regarding the physical and emotional aspects of initiating insulin therapy and its impact on their daily lives. Participants expressed feelings of dependency and anxiety, reinforcing how these findings affect their overall well-being and treatment adherence, and the importance of recognizing the unique physical and emotional needs of older diabetic patients. (Langerman & Forbes., 2024).

These insights into the emotional and physical challenges of insulin therapy among older adults also emphasize the broader relationship between diabetes management and mental health. This connection is further explored in the study "The Interrelationship between Diabetes Mellitus and Emotional Well-Being" which examines how diabetes impacts mental health and vice versa, it highlights that managing diabetes—through glucose monitoring, medications, and lifestyle adjustments—can cause stress, worsening emotional issues like depression and anxiety. This emotional strain often leads to medication noncompliance and poor diabetes management, increasing the risk of complications, emphasizing the need for a biopsychosocial approach to the care of diabetic patients, and recommending psychological interventions alongside diabetes treatment to improve outcomes. (Mangoulia et al, 2024)

Similarly, patient satisfaction is another essential factor shaping patient adherence and treatment success. For instance, a study titled "Injection practice and health-related quality of life among individuals with diabetes at Tikur Anbessa Specialized Hospital, Ethiopia: a cross-sectional study" discovered that individuals using insulin for over a decade showed higher satisfaction when adhering to treatment plans. However, 94.7% of the participants also had experienced hypoglycemia during insulin treatment, lowering satisfaction. These findings show that while patients may understand the importance of adhering to their treatment, it is also necessary for healthcare providers to address the need for patient education on managing the side effects as well. (Negash et al., 2023).

It is also essential to consider how patients' beliefs and perceptions of treatment affect their adherence to insulin therapy other than patient satisfaction, considering these factors had significantly influence how patients interact with their treatment. For instance, a study by Changwei Liu and colleagues investigated the effect of these beliefs on insulin adherence in diabetes mellitus (DM) and identified six key themes affecting adherence, including concerns about lifelong treatment, Trypanophobia (fear of injections), misconceptions about insulin, and fear of diabetes-related complications, as well as socioeconomic and side effect concerns. These findings highlight the critical need to address such beliefs and misconceptions during counseling to improve adherence. (Liu et al., 2022).

Understanding the lived experiences of diabetic individuals on insulin therapy further portrays these challenges, which provides valuable insights into patient behavior and satisfaction as well as barriers to adherence. Failure to explore these issues results in missed opportunities to develop targeted interventions in such a way that address these specific concerns. This otherwise reduce health disparities, enhance patient quality of life, and alleviate the financial and emotional burdens on both individuals and healthcare systems.

This emphasizes the importance of understanding the daily experiences of those who are depending on insulin as they must endure a strict routine and also the psychological burdens of fear, fatigue, and stress. By exploring these personal narratives, this study aims to uncover the broader challenges faced by patients and contribute to more holistic care strategies that address their full well-being, not just their medical needs. With the gaps presented, the researchers intend to establish an understanding with the previous studies and the current research that is being conducted. This would provide further knowledge on the internal issues that may affect the care that is being provided.

Therefore, this study lies in its potential to enhance the quality of care and support provided to Diabetes Mellitus (DM) patients under continuous insulin therapy and aims to improve the quality of care and support. By exploring their real-life experiences, the research will highlight the challenges they face and the coping strategies they use. The study's findings aim to improve emotional and practical support, fostering a positive attitude toward insulin therapy while enhancing patients' quality of life and health outcomes by identifying adherence factors, uncovering barriers to effective care, and suggesting interventions that promote interdisciplinary approaches to diabetes management, ultimately supporting innovative treatment and support strategies with significant implications for healthcare delivery, patient education, and support systems.

2. Objectives

This study aims to explore the lived experiences of Diabetes Mellitus (DM) patients on insulin therapy in Barangay Poro, San Fernando City, La Union

3. Materials and Methods

This study utilized a qualitative phenomenological design to explore the lived experiences of individuals with diabetes mellitus undergoing continuous insulin therapy (Husserl, 2021). Participants were asked to elaborate on their lived experiences as they perceived them. The process involved disregarding preconceived notions or biases to

explore the lived experience authentically. Data was primarily gathered through semi-structured interviews. The study aimed to provide a deeper understanding of what it meant to live with insulin therapy.

The research locale for this study was Barangay Poro, San Fernando, La Union, chosen for its accessibility and its population of participants relevant to the study, with over 195 diabetes mellitus (DM) patients, 13 of whom were currently under insulin therapy. In addition, Barangay Poro was identified by the City Health Office as one of the top 5 barangays with the highest number of diabetes mellitus cases on insulin therapy as of 2024, ranking second with 13 registered cases. The barangay's location efficiently supported time management and access to local healthcare facilities and services, such as lying-in clinics, which supported the needs of individuals living in the barangay—making it a practical location for the study, as participants had regular contact with healthcare providers, facilitating the collection of accurate and comprehensive data.

Its accessibility allowed for efficient data collection and minimized logistical challenges like travel time and costs, enabling the research team to focus on gathering in-depth insights and maintaining a smooth and timely process throughout the study. Considering all these aspects, the researchers decided that Barangay Poro was an ideal location to actualize the study and chose to interview between eight (8) to ten (10) participants undergoing insulin therapy or until the point of saturation was reached. This was based on the manageable population size of individuals with diabetes in Barangay Poro, allowing detailed data collection. The participants were identified with the assistance of Barangay Health Workers to help find eligible participants that met the study's criteria, ensuring a diverse range of perspectives on the experiences of individuals under insulin therapy.

The inclusion criteria for this study were as follows: a) residents of Barangay Poro diagnosed with Diabetes Mellitus, b) currently undergoing insulin therapy for at least six months, c) individuals receiving insulin therapy, regardless of whether they were using other diabetes medications and treatments, d) 18 to 65 years of age, and e) willing to participate in the study and able to provide informed consent. On the other hand, the exclusion criteria covered a) individuals with cognitive impairments that hindered participation, b) non-diabetic individuals, and c) residents undergoing other diabetes treatments that did not involve insulin therapy. Using purposive sampling, the study selected participants with direct experience to gather meaningful insights into their daily challenges, the impact of insulin therapy, and necessary lifestyle adjustments, ensuring the findings were relevant and in-depth.

The study used open-ended, semi-structured interviews, beginning with one general question followed by specific follow-up questions. This approach allowed participants to share freely while guiding the conversation to explore key areas. Semi-structured interviews were chosen to ensure a balance between structure and adaptability, ensuring both consistency and the ability to delve into unique experiences.

This flexible approach accommodated the unique needs of diabetic patients, especially elderly participants who might have faced challenges with focus or memory. To ensure accurate documentation of participants' narratives, responses were recorded using a cell phone, while the researchers took notes to capture contextual details and non-verbal cues. Before recording, participants were fully informed, and their consent was obtained in accordance with ethical standards.

Before data collection, the research proposal was reviewed by the Technical Panel, authorized by the Dean, and approved by the Lorma Colleges Research Ethics Committee (LC-REC) to ensure ethical compliance. Upon clearance, the researchers sought permission from the City Health Office (CHO) to identify the total number of diabetes mellitus patients under insulin therapy in Barangay Poro and to conduct interviews. They then obtained approval from the Barangay Captain of Poro, with barangay health workers (BHWs) assisting in identifying and reaching out to eligible participants and accompanying the researchers during interviews to ensure the participants' well-being.

Participants were briefed on the study objectives, and informed consent—including for audio recording—was obtained, with the option to decline without consequences. To safeguard participants' well-being, interviews using a house-to-house approach lasted approximately 10 to 20 minutes per session. Only one session was necessary for each participant, as all interviews were completed without the need for rescheduling or follow-up sessions. These were conducted in familiar settings using participants' preferred language and scheduled post-insulin administration or after meals to reduce the risk of hypoglycemia or discomfort during the interview. Data, including audio recordings and transcriptions validated by participants, were securely stored in a private Google Drive with restricted access only to the researchers and were permanently deleted upon study completion to maintain confidentiality.

After each interview, a debriefing session was conducted to address participants' concerns, ensure their well-being, and reaffirm confidentiality. The researchers asked if any questions made participants feel uncomfortable and reviewed and refined them to improve future interviews. If participants experienced distress, breaks were provided and willingness to continue was reassessed. The researchers sought assistance from the barangay health workers if needed in handling any medical or emotional concerns beyond the researchers' expertise and capability.

Emergency protocols were strictly followed to ensure participant safety during interviews. A brief health assessment was conducted beforehand, and a quick source of glucose, such as juice or candy, was kept readily available to address potential signs of low blood sugar. If a participant experienced dizziness, weakness, or alteration in consciousness, the interview was paused immediately, glucose was provided if necessary, and a barangay health worker was alerted to assess the situation. Emergency healthcare providers were contacted for immediate medical intervention if the condition worsened or did not improve. Following an emergency, a full incident report was documented and

specific actions and follow-up check up to monitor and prioritize participants' health and safety was given.

Multiple approaches were applied to ensure transparency, accuracy, and rigor. Researchers utilized participant selection criteria, data collection methods, and analysis procedures to ensure clarity and transparency. Credibility was achieved by accurately reflecting participants' experiences through prolonged engagement, reflexivity, and triangulation.

Dependability ensured consistent, reliable findings over time. Methodological steps were documented using an audit trail. Member checking allowed participants to review and verify data, minimizing biases and ensuring accuracy. Confirmability focused on ensuring findings reflected participants' insights rather than researcher bias. Reflexive journaling, member checking, and peer debriefing promoted objectivity and transparency, maintaining integrity throughout the research process. Transferability was supported through thick descriptions, enabling readers to judge the applicability of the findings to other contexts. Reflexivity ensured that researchers remained aware of their assumptions, biases, and positionality, keeping all processes grounded in participants' lived realities.

The study adhered to the seven core ethical principles of nursing: beneficence, non-maleficence, autonomy, confidentiality, justice, veracity, and fidelity. Participants were fully informed about the study's purpose, methods, risks, and benefits before providing consent, with an emphasis on obtaining explicit consent for the use of audio recordings during interviews to ensure that no responses were missed. Participation was voluntary, and participants had the option to withdraw at any time, ensuring respect for their autonomy (NetCE, 2023).

The study was self-funded, ensuring independence from external influence and enhancing credibility. Regular updates were provided to participants to ensure transparency. The principles of beneficence and non-maleficence guided the creation of a supportive environment, with active listening and the careful avoidance of leading questions that might trigger or provoke participants. Justice ensured fair participant selection and unbiased results. Veracity was maintained through accurate and transparent communication. Confidentiality was protected through anonymization, secure storage, and destruction of data after the study. Fidelity was demonstrated by upholding commitments to participants' well-being and privacy throughout the research.

After the data were collected through audio recordings and digital transcripts, the researchers classified the information according to Barangay Poro, San Fernando City, La Union, where the participants resided. The seven-step Colaizzi's Method, as outlined by Praveena and Sasikumar (2021), was then applied to analyze the data systematically. This structured approach guided the researchers in uncovering meaningful themes and patterns from the data, ultimately providing a nuanced interpretation of the participants' experiences.

The first step involved allowing the researchers to read the interview transcripts multiple times, allowing for a thorough understanding of the participants' experiences with

insulin therapy. Next, after familiarizing themselves with the data, the researchers identified significant statements crucially related to the phenomenon under study—particularly the challenges and adjustments participants faced in managing continuous insulin therapy.

In the third step, the researchers derived meanings from these significant statements. This process required interpreting the data to uncover underlying themes within the participants' descriptions of their lived experiences. The meanings formulated emphasized the emotional and psychological impacts of insulin therapy, as well as the physical and social adjustments participants made. Fourth, these formulated meanings were organized into clusters based on similarities and recurring concepts. The clustered meanings were then developed into broader themes, such as self-management struggles, fear of long-term complications, and support from family and community. These themes provided a framework for understanding patterns within participants' experiences.

In the fifth step, the researchers synthesized the themes into an exhaustive description, capturing a comprehensive view of the participants' lived experiences. This description offered insight into their daily challenges, hopes, and coping mechanisms. The sixth step involved outlining the Fundamental Structure of the Phenomenon, summarizing the core elements of insulin therapy in the lives of participants. This step highlighted key physical, emotional, and social aspects of managing diabetes and insulin therapy.

Finally, the findings were returned to participants for validation, allowing them to review and confirm the researchers' interpretations and ensuring that the study authentically reflected their experiences. The study findings were shared with participants, their families, and local community leaders to provide insight into the struggles of individuals on insulin therapy, facilitate family understanding and support, and promote discussions on healthcare improvements for diabetic patients. The researchers developed feasible actions to address the identified findings, such as creating educational materials on insulin management, collaborating with healthcare providers to implement support programs, and advocating for policy changes to improve access to affordable diabetes care.

4. Results

The results of the analysis of the selected participants presented the pertinent findings of the study that determined the lived experiences of the Diabetes Mellitus patients under Insulin Therapy in Barangay Poro, City of San Fernando, La Union. Three themes were identified based on the data collected from the narratives of 10 Diabetes Mellitus patients under insulin therapy. The first major theme identified is “Into the Unknown” with three subthemes identified, namely: (1) Prick of Fear, (2) Price of Living, and (3) Lifeline Running Low. The second major theme identified is “Cracked Mirror” with four subthemes identified, namely: (1) Branded by the Syringe, (2) One Prick Too Late, (3) The Hunger Loop, and (4) From the Top, Make it Drop. The third major theme identified is “The Sweet Side of Change,” with five subthemes were identified, namely: (1) From Bitter

to Better, (2) Not-So-Sugar-Coated, (3) Sweet Victory!, (4) The Real Sweeteners, and (5) Honey, I Got This.

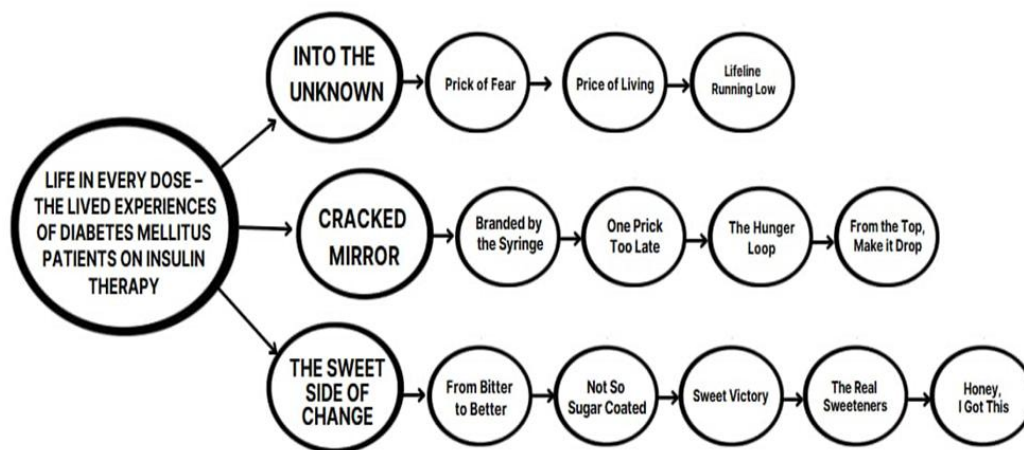


Figure 1 The study revealed three (3) major themes and thirteen (13) subthemes from the lived experiences of diabetes patients on insulin therapy: "Into the Unknown" captures their fears and uncertainties; "Cracked Mirror" reflects the emotional and physical challenges; and "The Sweet Side of Change" highlights their growth, acceptance, and resilience.

5. Discussion

Under the major theme **Into the Unknown**, the initial phase of insulin therapy was described as a difficult transition marked by emotional distress, financial burden, and limited access to medication. Participants expressed fear and hesitation due to painful injections, alongside struggles with the high cost and inconsistent availability of insulin in public health facilities. These experiences reflect how beginning insulin treatment involves not only a medical adjustment but also significant emotional and practical challenges.

The subtheme **Prick of Fear** captures the emotional hurdle faced by individuals as they begin their journey with insulin therapy, emphasizing the deep-seated fear and anxiety triggered by the use of needles. For many, the thought of daily injections became a source of stress, uncertainty, and discomfort, often creating resistance toward the treatment. This fear, rooted in Trypanophobia, initially disrupted their confidence and willingness to manage their condition. However, through time and exposure, some individuals began to overcome this emotional barrier, realizing that confronting this fear was a necessary step toward preserving their health. Their accounts reflect how the early fear of injections gradually gave way to acceptance, enabling them to take control of their diabetes and move forward with their treatment.

The subtheme **Price of Living** highlights the significant financial burden individuals face in affording insulin, with its rising cost consuming a large portion of

household budgets and exacerbating health inequities. Many struggle to balance the high expense of insulin and other medical supplies alongside essential needs like housing, food, and transportation, especially without adequate insurance. Participants shared how the ongoing cost of daily insulin injections and additional medications forces difficult trade-offs, sometimes leading to skipped doses or treatment delays. These financial challenges create a constant struggle, impacting their ability to maintain consistent diabetes management and overall quality of life.

The subtheme **Lifeline Running Low** delves into the critical problem of insulin shortages and its impact on patients who rely on a steady supply for survival. Fluctuating stock levels at hospitals and pharmacies lead to delays, increased costs, and sometimes complete unavailability, forcing patients to seek alternative and often more expensive sources. Participants shared experiences of having to buy insulin privately when free supplies ran out, causing financial strain and uncertainty in managing their condition. These challenges emphasize the urgent need for better stock management and policies to ensure consistent and affordable access to insulin for those who depend on it.

Under the major theme **Cracked Mirror**, the complex psychological, physiological, social, and emotional struggles of diabetic patients undergoing insulin therapy were explored. Participants described a fragmented sense of self, caught between the necessity of treatment for survival and the weight of stigma, forgetfulness, and physical difficulties. This theme illustrates how their self-perception is disrupted by the challenges of managing their condition, leading to a struggle to maintain normalcy, autonomy, and acceptance within society.

The subtheme **Branded by the Syringe** explores the social stigma faced by individuals dependent on insulin therapy. Many participants expressed hesitation to disclose their insulin use due to fear of judgment and negative perceptions, as insulin is often misunderstood and associated with worsening illness or danger. These experiences reveal how stigma creates an emotional burden that impacts confidence, social interactions, and adherence to treatment, highlighting the need for greater diabetes education and advocacy to promote understanding and support.

The subtheme **One Prick Too Late** shows the challenges participants face in maintaining consistent insulin therapy due to forgetfulness, where even a single missed dose can significantly impact their health. Participants shared that busy schedules, distractions, and changes in routine—such as meals, travel, work, or household chores—often cause lapses in insulin use. These experiences reveal how life's unpredictability creates barriers to strict insulin adherence. This underscores the need for more flexible diabetes management approaches to help patients maintain their treatment despite these challenges.

The subtheme **Hunger Loop** highlights how insulin therapy can increase appetite, leading to overeating and potential weight gain. Participants shared experiences of insulin causing physical weakness or stronger hunger signals, which influenced their eating habits and resulted in noticeable weight changes. These accounts show that while insulin is essential for blood sugar control, it can also create challenges with appetite regulation and body image. This emphasizes the need for targeted support and nutritional guidance to help patients manage both their health and self-esteem during treatment.

The subtheme **From the Top, Make it Drop** reveals the distress caused by hypoglycemia in individuals undergoing insulin therapy, focusing on the sudden and

severe drops in blood sugar. Participants described how missed meals, physical activity, or insulin errors can trigger these episodes, resulting in physical weakness, trembling, and emergency medical interventions. These experiences show the unpredictable nature of hypoglycemia and its significant physical and emotional impact on daily life. The accounts emphasize the importance of awareness, careful meal planning, and immediate access to treatment to manage this serious complication of insulin therapy.

The major theme **Sweet Side of Change** examines how participants adjusted to life with insulin therapy, emphasizing the vital influence of their support networks throughout this process. The term “sweet” connects both to managing blood sugar and the nurturing encouragement they received, while “change” captures the profound lifestyle shift they faced. From their initial introduction to insulin, participants relied on the care, guidance, and reassurance of family, friends, and healthcare providers to help them navigate challenges. This theme reveals that despite early difficulties, strong support transformed the experience into one that was more manageable and hopeful.

The subtheme **From Bitter to Better** focuses on the participants’ process of coming to terms with insulin therapy, which they initially met with hesitation, fear, or resistance. It explores how many participants viewed insulin injections as intimidating or burdensome but were ultimately motivated by their strong desire to control their condition and extend their lives. Based on the participants’ accounts, the journey toward acceptance was often difficult, marked by emotional struggle and apprehension toward starting insulin therapy. Despite these challenges, they gradually adapted and incorporated insulin into their daily routines, recognizing its essential role in managing their diabetes. The participants’ experiences show a progression from fear to acceptance, highlighting their resilience and the emotional growth that accompanies embracing this critical treatment.

The subtheme **Not-So-Sugar-Coated** examines the participants’ experiences in adjusting to lifestyle changes following their diabetes diagnosis. It highlights the challenges they faced in reducing or giving up favorite foods but also their intentional efforts to make sacrifices for better health. Participants shared how they practiced moderation, such as cutting back on sweets and altering dietary habits to support their condition. Their stories reveal a strong sense of resilience and self-discipline in managing their diet and incorporating physical activity to maintain healthier blood sugar levels. Additionally, the subtheme acknowledges the emotional and financial challenges involved, illustrating how participants balanced personal determination with the broader realities of diabetes management in their daily lives.

The subtheme **Sweet Victory** focuses on the positive effects of insulin therapy on the participants’ health. Many shared experiences of increased strength and relief from previous symptoms after starting insulin. Participants reported noticeable improvements, such as better blood sugar control and higher energy levels, which contributed to enhanced overall well-being. These accounts highlight how consistent insulin use led to fewer symptoms and a greater sense of physical stability. In addition to physical benefits, participants described feeling emotionally uplifted and more confident in managing their diabetes, emphasizing the vital role of insulin therapy in improving both health and quality of life.

The subtheme **The Real Sweeteners** highlights the vital support participants receive from their families, friends, and loved ones in managing their diabetes. Many shared how their children played a key role in helping with medication schedules and insulin injections,

providing both practical assistance and emotional encouragement. Participants emphasized the importance of family involvement, noting how spouses and relatives offered reminders, guidance, and help with injections, which eased the challenges of treatment adherence. These experiences reveal how emotional and practical support from loved ones not only reduces stress but also promotes healthier habits and sustained commitment to diabetes management. Overall, the presence of a strong support system proved essential in helping participants maintain their treatment and improve their well-being.

The subtheme **Honey, I Got This** highlights the participants' progress toward becoming more independent in managing their diabetes and taking ownership of their health. Initially, many relied on family members for support with insulin injections, but over time, they gained confidence in handling their care on their own. Some shared experiences of gradually learning to self-inject and taking the initiative to manage their insulin therapy independently. These accounts reflect a clear shift toward self-reliance as participants adapted to their condition and embraced greater responsibility. This journey of empowerment marks an important milestone, demonstrating their resilience and determination to effectively manage their diabetes despite its challenges.

6. Conclusion

Participants initiating insulin therapy often face emotional challenges, including Trypanophobia, anxiety about self-injection, and distress from rapid changes in their treatment plan. These feelings can be worsened by financial constraints and inconsistent access to insulin at public health centers, often forcing individuals to choose between securing medication or basic needs.

As therapy progresses, participants may struggle with issues like missed doses, insulin-induced hunger, overeating, and hypoglycemic episodes. These difficulties can impede treatment adherence and negatively affect their self-image and emotional well-being. At the same time, stigma and misconceptions about insulin use can lead to feelings of shame and isolation.

Despite these challenges, the participants adapted by developing new routines and making changes with their diets. While, support from family, friends, peers, and healthcare providers is crucial in helping them to develop resilience and regain control over their health.

Based on the findings of the study, the researchers recommend the following to address the identified needs and gaps in insulin therapy management among diabetic individuals. The Department of Health (DOH) may consider launching nationwide educational campaigns within one (1) to three (3) months to address misconceptions about insulin therapy and Trypanophobia. These campaigns should focus on building awareness through relatable and culturally sensitive information, aiming to reduce hesitation and fear around insulin injections. In addition, the DOH may develop and implement educational programs on hypoglycemia management every six (6) months to enhance patient safety and reduce emergency cases. These programs should be coupled with accessible and practical resources that encourage realistic dietary changes tailored for diabetic patients.

The City Health Office may establish counseling services and support groups for newly diagnosed diabetic patients within three (3) to six (6) months. These groups can foster emotional support, promote sharing of lived experiences, and help patients cope with lifestyle adjustments. Furthermore, they may organize monthly barangay health forums to

raise awareness about diabetes, insulin therapy, and to dispel stigma through localized education strategies. Local Government Units (LGUs) and Barangay Health Centers may facilitate monthly peer support group meetings in community or health center settings, providing a platform where individuals undergoing insulin therapy can share their journeys and encourage one another.

To alleviate financial burdens, PhilHealth may explore integrating insulin therapy into the National Health Insurance Program every two (2) months, helping to reduce out-of-pocket expenses and improving access to essential treatment. Similarly, the Department of Social Welfare and Development (DSWD) may coordinate on a monthly basis to provide financial assistance and free or discounted diabetes medications to underprivileged groups. The Supply Chain Management Division may also work on strengthening supply chain systems on a monthly basis, particularly in underserved rural areas, ensuring a consistent and timely availability of insulin and related medical supplies.

In line with digital transformation, the Department of Information and Communications Technology (DICT) may utilize mobile applications and telemedicine platforms on a monthly basis to assist in remote insulin dose scheduling, patient monitoring, and providing real-time health guidance, especially for rural communities. LGUs may also deploy mobile clinics to remote barangays every month to offer routine check-ups, glucose monitoring, insulin education, and access to affordable insulin for low-income individuals.

Furthermore, the integration of mental health into diabetes care is recommended. LGUs may consider providing counseling and emotional support services in urban and rural health facilities on a yearly basis to promote psychological well-being and treatment adherence. The City Health Office (CHO) may conduct family-oriented education and training sessions every three (3) months to strengthen family involvement in insulin therapy and improve patient outcomes. Quarterly training sessions for patients on insulin self-administration, as well as resources on meal planning, exercise, and treatment consistency, should also be provided.

Barangay Health Workers (BHWs) may conduct weekly home visits and follow-ups to monitor treatment adherence, detect early signs of hypoglycemia, and provide personalized diabetes support. Finally, future researchers are encouraged to investigate the long-term effects of community-based interventions and explore the role of mental health in diabetes management. These studies may provide further insights into building sustainable and effective care systems for diabetic individuals.

7. Acknowledgements

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9. Appendices

APPENDIX A Approval Letter from REC



LC-REC Form #624
APPROVAL LETTER

REC Reference #: 2025-011

March 6, 2025

To: Francine Myra Altis, James Angelo Areola, Sayr Marianne Baguyo, Lee Chen Ducusin, Sherlene Desyre Dulay, Keefe Corleone Javier, Precious Carylle Lopez and Marc Owen Mingaracal
LORMA Colleges, College of Nursing

Subject: Approval of the Research Study "LIFE IN EVERY DOSE – THE LIVED EXPERIENCES OF DIABETES MELLITUS PATIENTS ON INSULIN THERAPY" by the Research Ethics Committee (REC).

Dear Researchers,

The Research Ethics Committee (REC) has reviewed your application to conduct the above-mentioned research study in the LOCALE OF STUDY with you as the Principal Investigators within the duration of March 06, 2025 to March 06, 2026.

The Following documents have been reviewed and approved:

1. Letter of Intent to Conduct the Study
2. Endorsement of the Research Technical Panel
3. Title and Statement of the Problem/ Objective
4. Literature Review
5. Methods and Procedures
6. Population and Locale
7. Exclusion/Inclusion Criteria
8. Data Analysis
9. Ethical Considerations

We approve the study to be conducted in the presented form provided the following are integrated in the final research protocol:

1. All information in the informed consent form should be reflected in the manuscript.
2. State the informed consent form as if the researchers are directly communicating with the participants and translate it into *iloco* or local language.

None of the Investigators participating in this study took part in the decision making and voting procedure for this study.

The Institutional REC expects to be informed about the progress of the study, any revision in the protocol before

10. Author(s) Biodata

Mr. Lee Chen P. Ducusin, a third-year student of the Bachelor of Science in Nursing program at Lorma Colleges, is at the forefront of a dedicated research team composed of equally passionate peers. Under the expert guidance of their research adviser, Mr. Aurelio M. Mañego, the team is delving into the profound and often challenging lived experiences of diabetes mellitus patients under insulin therapy. With a shared commitment to academic excellence and compassionate care, they aim to shed light on the unique needs of this vulnerable population.