

To Assess the Role of Family and Community Support for Women Aged 40 to 60 in Diabetes Self-Management in Chipata, North Province, Zambia

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Abstract: This study observes the influence of family and community care on diabetes self-management among women in Chipata, North Province, Zambia. Women with type 2 diabetes in rural regions often lack adequate healthcare resources, making comfortable support systems vital for disease management. Through qualitative conferences and structured investigations, the study elucidates the impact of emotional support, practical assistance, and communal engagement on medication adherence, dietary habits, and mental health. Results reveal that women who receive reliable support from family members and community screens validate stronger self-efficacy, improved treatment amenability, and better psychological resilience. However, complications such as stigma, gender norms, and low health literacy persist. The findings emphasize the need to develop community health strategies that actively engage families and empower local support structures. Integrating social support into national diabetes care frameworks may significantly enhance outcomes for women in similar low-resource settings.

Keywords: Diabetes Self-Management, Family Support, Community Engagement, Women's Health, Rural Zambia, Social Determinants of Health.

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I. INTRODUCTION

Diabetes Mellitus, particularly Type 2 Diabetes Mellitus (T2DM), has arisen as a major public health concern worldwide and in sub-Saharan Africa. The International Diabetes Federation estimates that more than 24 million adults in the region live with diabetes, and this character is projected to increase significantly in the coming periods. In Zambia, the burden of T2DM is growing quickly, particularly among women in their middle centuries, who often rearrange household responsibilities, caregiving roles, and economic activities while also managing their health. For these women, diabetes management is not only a clinical task but also a daily negotiation shaped by social, cultural, and environmental factors.

Self-management is widely recognized as the cornerstone of diabetes care. It includes a range of behaviors, including observing medicine, maintaining a healthy diet, engaging in physical activity, nursing blood glucose, and handling stress. However, for many women in low-resource settings such as Chipata, the ability to sustain these practices

depends heavily on the support they receive from family members and the broader community. Unlike in high-income countries, where diabetes care often relies on structured health systems, in Zambia, social support networks play a vital role in filling gaps left by limited healthcare resources.

Family support is particularly critical because it directly influences daily routines related to food preparation, medication adherence, and emotional well-being. For instance, spouses, children, or extended family members may provide encouragement, help with meal planning, and remind patients to take their medication, or accompany them to clinics. Such assistance not only reduces the burden of self-care but also fosters a sense of belonging and motivation to continue with prescribed management practices. Conversely, the absence of family support—or in some cases, negative attitudes from family members—can undermine women's ability to effectively manage their condition, leading to poor glycemic control and heightened risk of complications.

Beyond the family unit, community support systems play an equally important role. In Chipata, like in many parts

of rural Zambia, communities are tightly knit and often organized around churches, women's groups, and informal social networks. These structures can provide practical help, such as transport to health facilities, access to food during times of scarcity, or collective encouragement through peer support groups. Community health workers also act as important links between healthcare facilities and households, offering guidance, follow-up, and culturally appropriate health education. Such networks can reduce stigma, promote resilience, and create an environment that enables women to adopt and sustain positive self-care practices.

Understanding the role of family and community support in diabetes management is therefore crucial for improving health outcomes among women in Chipata. This perspective shifts the focus from an individual-centered model of self-management to a more holistic, socially embedded approach. By examining how social relationships shape health behaviors, this study aims to generate insights that can inform more effective interventions. Ultimately, strengthening family involvement and community engagement has the potential to enhance not only women's capacity for self-care but also the overall effectiveness of diabetes management programs in Zambia.

➤ *Problem Statement*

The management of Type 2 Diabetes Mellitus (T2DM) remains a life-threatening challenge in Zambia, particularly among women living in semi-urban and rural settings such as Chipata. While clinical strategies underline self-management practices—such as medication adherence, healthy diets, physical activity, and glucose intensive care—the ability of women to maintain these behaviors is often controlled by socio-economic and cultural realities. Many women between the ages of 40 and 60 not only manage their illness but also shoulder the dual burden of household responsibilities and caregiving roles, which frequently take precedence over their own health needs.

Despite the acknowledged importance of family and community support in chronic disease care, limited research has been conducted in Zambia to explore how these support systems shape women's diabetes self-management. Evidence from other sub-Saharan African countries suggests that family support, particularly in meal preparation and emotional encouragement, can significantly improve treatment adherence and glycemic control. However, in some contexts, women report receiving less support from spouses and family members compared to men, creating gendered disparities in health outcomes. These things show the need to inspect whether similar forms exist in Chipata and how they influence women's capacity effectively.

Furthermore, community support structures—such as churches, women's groups, and community health workers—are underutilized in formal diabetes care strategies despite their potential to provide practical assistance, reduce stigma, and foster resilience. Without assimilating these social dimensions, diabetes care risks remaining fragmented, extremely clinical, and unreachable to those who rely most on social networks for day-to-day existence.

Thus, the problem is a persistent gap in understanding and leveraging family and community support systems in diabetes self-management for women in Chipata, Northern Province, Zambia. Addressing this gap is vital for designing culturally appropriate interventions that improve health outcomes and reduce the burden of diabetes difficulties among women.

➤ *Research Justification*

Diabetes self-management is universally recognized as the foundation of effective diabetes care, yet the ability to carry it out successfully depends on more than medical knowledge and clinical follow-up. In resource-constrained settings such as Chipata, women's self-management behaviors are expressively shaped by social structures, family roles, and community collaborations. Justifying a focus on these dimensions is essential because clinical interventions alone are often insufficient to address the broader determinants of health.

Women in the 40–60 age group face unique challenges that justify targeted research. They are central to household food preparation and caregiving responsibilities, meaning their health practices influence not only their own outcomes but also those of their families. If women are not adequately supported in managing diabetes, the implications extend beyond individual health to family nutrition and household stability. Understanding how family members either enable or hinder women's self-care can therefore provide insights into practical, context-specific strategies for improving adherence and glycaemic control.

Additionally, community support systems in Chipata, such as churches, women's associations, and community health workers, represent underutilized resources in diabetes management. These networks have the potential to reduce stigma, provide emotional support, and deliver accessible education that complements formal healthcare services. However, the extent and effectiveness of their role in women's diabetes self-management remain poorly documented.

By investigating the contribution of family and community support, this research will provide evidence to strengthen integrated care models that reflect the lived realities of women in Chipata. The findings are expected to inform policymakers, healthcare providers, and local leaders about culturally appropriate interventions that enhance women's resilience, improve treatment adherence, and ultimately reduce the long-term complications and economic burden of diabetes in Zambia.

➤ *Objectives*

• *General Objective*

To assess the role of family and community support in the self-management of Type 2 Diabetes Mellitus among women in Chipata, Northern Province, Zambia.

- *Specific Objectives*

- ✓ To study the extent and nature of family support received by women in managing diabetes, including dietary practices, medication adherence, and emotional well-being.
- ✓ To discover the role of community structures—such as churches, women's groups, and community health workers—in supporting women's diabetes self-management.
- ✓ To find barriers and challenges faced by women in accessing adequate family and community support for diabetes care.
- ✓ To investigate how family and community support influences treatment adherence and overall health outcomes among women living with type 2 diabetes.
- ✓ To afford evidence-based recommendations for strengthening family- and community-based interventions in diabetes management programs in Zambia.

➤ *Research Questions*

- What forms of family support do women with type 2 diabetes in Chipata receive in their daily self-management practices?
- How do family members influence women's adherence to dietary guidelines, medication use, and clinic attendance?
- What role do community structures—such as churches, women's groups, and community health workers—play in supporting diabetes self-management among women?
- What barriers hinder women from accessing effective family and community support for managing diabetes?
- In what ways does family and community support affect health outcomes, resilience, and treatment adherence among women living with type 2 diabetes in Chipata?
- How can family- and community-based interventions be strengthened to improve women's diabetes care in Zambia?

II. LITERATURE REVIEW

➤ *Global Perspectives on Diabetes Self-Management*

Globally, diabetes is one of the most prevalent non-communicable diseases, affecting over 537 million adults (International Diabetes Federation [IDF], 2021). Self-management, which includes medication adherence, diet, physical activity, and blood glucose monitoring, is recognized as central to controlling the disease and reducing complications (Shrivastava et al., 2013). However, studies have shown that successful self-management is influenced not only by individual behaviors but also by social and environmental support systems (Baig et al., 2015). Family involvement, in particular, has been highlighted as a determinant of adherence and improved glycaemic control (Mayberry & Osborn, 2012).

➤ *Family Support in Diabetes Care*

Research demonstrates that family support has both direct and indirect effects on diabetes outcomes. Supportive

family members often assist with meal preparation, reminders for medication, and transportation to health facilities (Baig et al., 2015). Emotional support further helps patients cope with the psychological burden of chronic illness. Conversely, unsupportive behaviors—such as neglect or stigmatization—can undermine adherence and worsen health outcomes (Mayberry & Osborn, 2012). Evidence from both high- and low-income settings suggests that patients with strong family support demonstrate better glucose control, resilience, and quality of life compared to those with limited support.

➤ *Community Livelihood and Social Schemes*

Beyond the family, community support systems—including religious groups, peer support networks, and community health workers—play a vital role in diabetes management. In many low-resource contexts, community support bridges gaps left by overstretched health systems. Peer-led interventions and community-based education programs have been associated with improved self-care behaviors and better health outcomes (Tang et al., 2014). Spiritual and religious support also provide coping mechanisms, reduce stigma, and enhance motivation for long-term self-care (Shah et al., 2015).

➤ *Diabetes in Sub-Saharan Africa*

In sub-Saharan Africa, the prevalence of diabetes is increasing due to urbanization, lifestyle changes, and limited health literacy (Atun et al., 2017). Studies show that individuals often rely heavily on family and community networks for practical and emotional support due to the limited availability of specialized diabetes care. For example, a study in South Africa found that family support significantly improved patients' ability to follow dietary advice and medication regimens (Mphasha et al., 2022). Similarly, research in Uganda demonstrated that patients with supportive family members were more likely to achieve good glycaemic mechanism (Kansiime et al., 2019).

➤ *Diabetes in Zambia*

Zambia is experiencing a growing burden of Type 2 Diabetes, particularly among women aged 40 to 60, who often manage both domestic and economic responsibilities. Despite the rising prevalence, healthcare services remain poorly integrated, and little research has been conducted on the part of social sustenance in diabetes care. Existing studies emphasize the importance of community health workers and family involvement in bridging healthcare gaps (Mutale et al., 2020). In rural areas such as Chipata, family and community support are likely to be central to women's ability to manage their condition, yet this remains underexplored in the literature.

➤ *Research Gap*

Although global and regional evidence underscores the role of family and community support in diabetes self-management, limited research has been conducted in Zambia, particularly focusing on women in Chipata. Understanding the social dynamics influencing diabetes care in this context is necessary to design culturally relevant interventions. This study therefore seeks to fill that gap by exploring how family

and community support affect women's self-management of diabetes in Chipata, Northern Province, Zambia.

III. METHODOLOGY

➤ Research Design

This study conducted a descriptive cross-sectional mixed-methods design, merging both quantitative and qualitative approaches. The design was chosen because it allows for the collection of numerical data to establish patterns of family and community support, while also capturing the lived experiences of women with Type 2 Diabetes Mellitus (T2DM) in their self-management journey. The quantitative component helped to describe the prevalence and types of support received, whereas the qualitative component provided deeper insights into the cultural, emotional, and relational aspects of diabetes management. Together, these approaches offered a more holistic understanding of the phenomenon under investigation.

➤ Study Area

The research was conducted in Chipata District, Northern Province of Zambia, a semi-urban and rural area with a rapidly increasing prevalence of diabetes. Chipata was selected because of its unique socio-cultural setting, where women often carry the dual burden of household care and economic activities while managing their own health. Health services in Chipata are provided through government hospitals, rural health centers, and community health posts, but like many parts of Zambia, they face challenges such as inadequate staffing, limited supplies, and poor integration of chronic disease care. These challenges make family and community support especially important for effective self-management of T2DM.

➤ Study Population

The study population consisted of women aged 40–60 years diagnosed with T2DM, family members directly involved in their care, and key community stakeholders such as community health workers, church leaders, and leaders of women's associations. The inclusion of different categories of participants ensured that the perspectives of both the women managing diabetes and their social support networks were represented.

➤ Sampling Strategy and Sample Size

A purposive sampling technique was used to select participants who met the study's criteria. Women diagnosed with T2DM for at least six months and attending diabetes clinics at selected facilities in Chipata were enlisted with the support of healthcare employees. For the quantitative component, a sample of 150 women was surveyed, which was considered sufficient to generate descriptive and inferential statistics on support systems. For the qualitative component, 20 in-depth interviews with women, 10 interviews with family members, and 8 interviews with community stakeholders were conducted. Sampling continued until thematic saturation was achieved, meaning no new insights were emerging from the interviews.

➤ Inclusion and Exclusion Criteria:

• Enclosure Criteria:

- ✓ Women aged 40–60 years with a clinical diagnosis of T2DM.
- ✓ Participants residing in Chipata District for at least one year.
- ✓ Women who provided informed consent.

• Rejection Criteria:

- ✓ Women with gestational diabetes or Type 1 Diabetes.
- ✓ Patients too ill to participate in interviews or surveys.
- ✓ Individuals unwilling to participate.

➤ Data Collection Methods:

• Quantitative Data Collection

Data were collected using a structured questionnaire, which included sections on demographic information, diabetes self-management practices, family support (e.g., meal preparation, medication reminders, clinic accompaniment), and community support (e.g., peer groups, church involvement, health worker visits). The tool was adapted from established diabetes self-management and social support scales and contextualized to the Zambian setting.

• Qualitative Data Collection

Semi-structured interview guides were used to collect qualitative data from women, family members, and community stakeholders. These interviews explored perceptions of support, barriers to effective diabetes management, cultural beliefs, and suggested ways to strengthen social support networks. Interviews were conducted in English, Nyanja, or Chewa, depending on participants' preference, and were audio-recorded with consent.

• Document Review

Secondary data, such as patient records, clinic reports, and local diabetes health education materials, were also reviewed to supplement primary data and provide contextual background.

➤ Data Analysis

• Quantitative Analysis:

Data from questionnaires were coded and entered into the Statistical Package for the Social Sciences (SPSS) version 26. Descriptive statistics (frequencies, means, percentages, and standard deviations) summarized participant characteristics and patterns of support. Inferential statistics, including chi-square tests and logistic regression, were used to examine associations between levels of support and diabetes self-management outcomes.

- *Qualitative Analysis:*

Qualitative data were transcribed word for word and translated into English where necessary. A thematic analysis approach was employed, involving coding, categorizing, and identifying emerging themes. NVivo software was used to succeed and unify data. The themes were compared across participant groups (women, family members, community stakeholders) to highlight similarities and differences in perspectives. Triangulation of quantitative and qualitative data strengthened the credibility of findings.

- *Ethical Considerations*

Ethical approval was found from the University of Zambia Biomedical Research Ethics Committee (UNZABREC). Permission required from the Ministry of Health and the Chipata District Health Office. Educated approval was gained from all participants preceding to statistics collection. Participants were assured of confidentiality and anonymity; pseudonyms were used during reporting to protect identities. Participation was voluntary, and defendants were sophisticated of their right to withdraw at any time without facing consequences. Data were steadily kept and used absolutely for research purposes.

- *Reliability and Validity*

To enhance reliability, the questionnaire was pre-tested on a small group of women outside the study site, and necessary revisions were made. Standardized measures were adapted from validated scales to ensure accuracy. In qualitative research, credibility was enhanced through member checking, whereby participants reviewed summaries of their responses to confirm accuracy. Triangulation of methods—surveys, interviews, and document review—also improved the validity of results.

- *Limitations of the Study*

The study accepted numerous boundaries. First, self-reported data may have been influenced by recall bias, with participants forgetting or misreporting some details of their diabetes management practices. Second, social popularity bias may have led respondents to provide answers they believed were expected rather than their true experiences. Third, the findings were specific to Chipata District and may not be generalizable to all regions of Zambia. Despite these limitations, the study generated valuable insights into the critical but underexplored role of family and community support in diabetes management.

IV. RESULTS AND DISCUSSION

A. Results

- *Socio-Demographic Characteristics of Participants*

A total of 150 women aged 40–60 years with Type 2 Diabetes Mellitus (T2DM) participated in the study. The majority (65%) were married, 20% widowed, and 15% divorced or single. Most respondents (72%) reported being the primary caregivers in their households, responsible for food preparation and family health decisions. About 60% of the women had only primary-level education, while 25% had

reached secondary level, and the remainder had no formal education.

- *Family Care in Diabetes Self-Management*

Findings discovered that 68% of participants received some form of family support in managing their condition. Common forms of support included reminders to take medication (54%), assistance in preparing appropriate meals (47%), and supplement to clinic visits (38%). However, 32% of women reported little or no family involvement, citing neglect, lack of understanding about diabetes, or competing household priorities as barriers. Emotional support was reported by only 40% of respondents, with widowed and divorced women particularly disadvantaged.

- *Community Support Structures*

Community support was less common equaled to family support. About 35% of women reported receiving guidance from community health workers, while 28% participated in church or women's group initiatives that encouraged healthy living. Peer support networks were limited, with only 15% of women engaged in structured support groups. Community health workers were particularly valued for providing follow-up care and culturally tailored education. However, gaps were identified in the availability and consistency of such community-based programs.

- *Hindrances to Effective Support*

Key barriers included limited knowledge about diabetes among family members, financial constraints that restricted access to appropriate food and medication, and cultural beliefs that normalized reliance on traditional remedies. Some participants reported stigma within their communities, with misconceptions that diabetes was caused by witchcraft or poor lifestyle choices, leading to isolation.

B. Discussion

The findings underscore the critical role of family support in diabetes self-management. Consistent with previous studies in sub-Saharan Africa, family involvement in meal preparation, medication reminders, and clinic attendance positively influenced adherence to treatment regimens (Mphasha et al., 2022). However, the uneven distribution of support—where married women reported more assistance compared to widowed or divorced women—suggests gendered and relational dynamics that must be addressed in interventions.

The relatively low levels of emotional support highlight a gap in holistic care. Studies elsewhere have shown that emotional encouragement is strongly linked to resilience, self-efficacy, and long-term adherence (Mayberry & Osborn, 2012). In the Chipata context, where women already carry heavy caregiving responsibilities, the absence of emotional reinforcement can exacerbate stress and lead to poor glycaemic control.

Community support structures were present but underutilized. The involvement of community health workers was shown to provide practical benefits, echoing findings from Uganda and Ghana where community-based programs

improved treatment adherence and reduced stigma (Kansiime et al., 2019). However, limited coverage and sustainability of community initiatives in Chipata restricted their impact. The relatively low participation in peer groups points to a missed opportunity for collective learning and shared encouragement.

The barriers identified—such as financial challenges, low diabetes literacy among family members, and cultural misconceptions—are consistent with broader literature on diabetes in Africa (Atun et al., 2017). These findings suggest that interventions must go beyond clinical education to include culturally sensitive awareness campaigns targeting families and communities. Addressing stigma is especially important, as negative community perceptions can isolate women and discourage them from seeking support.

Taken together, the results highlight the importance of adopting a socially embedded model of diabetes care, where family and community systems are actively engaged. Health systems in Zambia could benefit from integrating family education sessions into routine clinic visits, establishing peer-led support groups, and strengthening the role of community health workers. Such strategies align with evidence that social support improves not only self-management behaviors but also mental health and quality of life (Baig et al., 2015).

V. POLICY IMPLICATIONS AND RECOMMENDATIONS

A. Policy Implications

The findings from this study have several important implications for health policy and program development in Zambia, particularly in the management of Type 2 Diabetes Mellitus (T2DM) among women in Chipata. First, the study highlights that family and community support are critical determinants of effective diabetes self-management. Health policies that focus exclusively on clinical care without addressing these social dimensions risk overlooking key factors that encourage loyalty and long-term consequences.

Second, the uneven availability of family support, especially for widowed, divorced, or single women, points to a gendered disparity in access to informal care networks. This has recommendations for justice in health interventions, suggesting that policies should consider social and relational vulnerabilities in addition to medical needs.

Third, the limited reach and sustainability of community-based initiatives, including peer support groups and engagement of community health workers, indicate that current strategies may be insufficiently integrated into the formal health system. Without structured and continuous community support, women's self-management efforts remain fragmented, undermining overall diabetes control.

Finally, cultural misconceptions and stigma surrounding diabetes in the community pose significant barriers to effective self-management. Policies must address health literacy, community education, and culturally sensitive

communication to ensure that women receive the support they need in a publicly tolerable mode.

B. Recommendations

Constructed on these findings, the ensuing endorsements are proposed:

- **Integrate Family-Centered Interventions into Diabetes Care:** Health facilities should implement programs that actively involve family members in diabetes education and management, focusing on meal planning, medication adherence, and emotional support. Tailored workshops or counseling sessions can enhance the family's role in self-management.
- **Strengthen Community-Based Support Systems:** The Ministry of Health, in partnership with local NGOs and community leaders, should expand the coverage of peer support groups, women's associations, and community health worker programs. Structured community initiatives can provide consistent follow-up, practical assistance, and social encouragement.
- **Address Cultural Beliefs and Stigma:** Public health campaigns should target misconceptions about diabetes, emphasizing evidence-based information and culturally sensitive messaging. Community sensitization programs through churches, local radio, and women's networks can reduce stigma and encourage women to seek support.
- **Enhance Accessibility to Resources:** Policymakers should consider interventions to alleviate financial and logistical barriers, such as subsidized medication, transportation support to health facilities, and affordable access to nutritious food. This is especially important for women in rural or low-income households.
- **Incorporate Gender-Sensitive Approaches:** Special attention should be given to women who lack traditional family support, including widowed, divorced, or single women. Social protection programs, targeted community engagement, and counseling can help bridge gaps in support.
- **Monitor and Evaluate Interventions:** Continuous monitoring and evaluation of family and community-based programs are essential to ensure effectiveness and sustainability. Data collection on participation, adherence outcomes, and patient satisfaction can inform adjustments and policy decisions.

By implementing these recommendations, health authorities and community stakeholders can create a holistic, socially embedded model of diabetes care, where family and community networks complement clinical interventions. Such an approach has the potential to improve treatment adherence, enhance psychological well-being, and reduce long-term complications among women living with T2DM in Chipata and similar settings in Zambia.

VI. CONCLUSION

This study underscores the critical role of family and community support in shaping women's self-management of Type 2 Diabetes Mellitus (T2DM) in Chipata, Northern

Province, Zambia. The findings reveal that while family maintenance—through practical assistance, medication reminders, and emotional encouragement—positively influences adherence and health outcomes, it is not uniformly available. Women who lack supportive family links, particularly widowed or single women, face greater challenges in managing their disorder effectively.

Community support structures, including peer groups, women's relations, and community health workers, were initiate to complement family involvement by providing guidance, education, and social reinforcement. However, their reach and consistency remain limited, which constrains their potential impact. Barriers such as financial limitations, cultural misconceptions, and stigma further complicate women's ability to fully benefit from these support networks.

The study climaxes the need for a holistic, socially embedded approach to diabetes care, where healthcare interventions are integrated with family education, community engagement, and culturally sensitive outreach. Policies and programs that strengthen both informal and formal support systems are essential for improving treatment adherence, enhancing resilience, and reducing the long-term complications associated with T2DM among women.

In conclusion, family and community support are not merely complementary but central elements of effective diabetes self-management in resource-limited settings like Chipata. Future interventions must prioritize these social dimensions to ensure that women are equipped not only with medical care but also with the necessary emotional, practical, and social resources to manage diabetes successfully. Strengthening these networks can ultimately lead to improved health outcomes, better quality of life, and reduced healthcare burdens at equally domestic and community levels.

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