

## Type 2 Diabetes Mellitus Patients' Needs Assessment in Primary Care Setting: The Quiddity of Attitude in Quality Improvement

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### ABSTRACT

*Needs assessment for Chronic Diseases, and specifically Type 2 Diabetes Mellitus is usually done with the objective of identifying gaps to enable quality improvement. Quality improvement in T2DM care is heavily reliant on patient and provider behavior, and environmental factors. The aim of this study was to assess T2DM needs with a view of optimizing care. This was thus a qualitative study, which was part of a mixed method study design. It involved Focus Group Discussions (FGD), Key Informant Interviews (KII) and physical observation of care processes. Sample size was attained through the principal of saturation. Framework method was used for data analysis. The three qualitative approaches provided rich contextual data corroborated via triangulation. The study identified several needs: Knowledge, healthcare and socioeconomic needs amongst others. Simultaneously, it observed that despite much hype about factors that affect needs of T2DM, attitude is one single factor that subtly align environmental experience and knowledge to produce a particular behavior. Cognitive dissonance in attitude and how this relates to implicit and explicit attitude nuances needs assessment and consequently behavior. Paradoxical behaviors such as physical inactivity in impoverished populations that should be walking daily to work is explained by attitude. Improving knowledge and healthcare infrastructure does little to optimize care if attitude towards T2DM care is negative. Attitude is often measured in needs assessment, albeit with difficulties, but is overlooked and poorly understood when it comes to its enhancement since its impact is psychological. It is however pivotal and quintessential in translating education, culture, healthcare infrastructure and socioeconomic conditions into favorable T2DM behavior. Understanding the place of attitude and its quiddity in T2DM care spectrum provides a panoptic perspective for quality improvement.*

### Keywords

Quiddity, Quintessential, Paradoxical, Attitude, Psychological, Pivotal, Subtle, Panoptic, Cognitive dissonance, Implicit, Explicit.

### Background

A Type 2 Diabetes Mellitus is both multidimensional and multifaceted [1]. Majority of T2DM patients in Low and Middle Income Countries (LMIC) fail to attain recommended care targets [2]. This study was done to develop a T2DM monitoring tool in Primary Healthcare settings, the overarching goal being quality improvement. A needs assessment as part of processes to identify determinants of T2DM monitoring was done. Previous literature on T2DM needs has been on Knowledge, Attitude, Beliefs, Practices, economic challenges and healthcare infrastructure, including health

providers, resources and care processes among others [3]. However, all these factors are interrelated in terms of their impact on T2DM care quality, and one factor can be secondary to another and vice versa based on contextual issues. Attitude is an overarching quality that influences most, if not all T2DM needs and encompasses cognition, behavior and affection towards care [4]. Muschalik et al., 2019, documented the discrepant nature of implicit and explicit attitude in beneficial health behaviors {Muschalik, 2019, Does the discrepancy between implicit and explicit attitudes moderate the relationships between explicit attitude and (intention to) being physically active?}; similarly, Krane et al., 2014 noted that attitude is influenced by socioeconomic and healthcare infrastructure [5]. Choi et al., 2019 observed that explicit and implicit attitude differ in behavior towards disease [6].

In essence, attitude is the single most important factor on which most if not all care determinants coalesce since it underpins most mental functions. Failure to rightfully elucidate attitude because of its indirect measurement leads to non-focused conclusions that hardly enable quality improvement, especially due to the fact that attitude is the final common pathway for favorable health behavior [4]. Furthermore, in health research, rarely is the distinction between explicit and implicit attitude in measurements is made [7]. This implies understanding attitude and health behaviors is inadequate. As such, this study noted that attitude is a factor that is subtly detrimental to health and should be elucidated in needs assessment as a key psychological construct in positive health behavior.

## Methods

The bulk of Chronic Diseases' care, including T2DM are done at the Primary Healthcare settings. This was an exploratory mixed method study design. The first part was qualitative. It involved Focus Group Discussions (FGD) with Diabetics, Key Informant Interviews (KII) and Observation of care processes. Saturation was reached with 6 FGDs, 7 KII and 3 Observations. The study started with observation of care processes, followed by FGDs and lastly KII.

FGDs were done using deductive approach, each was maximum 90 minutes' duration and participants were T2DM patients only. Each FGD had between six to ten members of 30 years and above, mixed gender and varied duration of T2DM. Semi-structured questionnaire was used as a guide. Minutes were taken, through a video was also at hand for corroboration. KII included clinicians, Nurses, caregivers and Community Health workers. All the steps in T2DM care from entry at the facility gate, to registration till discharge were observed. Framework method was used in Data analysis. This included Transcription, familiarization with the data, coding, charting data into framework matrix and interpreting the data. During interpretation, relations, connections and causality were explored, themes were developed.

## Results

### Knowledge, Attitude, Practices and beliefs

Saturation was reached by the fourth FGD. This was corroborated by KII and physical observation. Interplay between both knowledge and practices with attitude was very evident in reaching saturation. For instance, it was unanimous that T2DM is serious, and needs behavior change by way of diabetic diet and physical activity. When asked on how often physical activity was done, it was clear the T2DM were not engaged in physical activity, apart from usual activities of daily living. Generally, there was no explanation for the paradox. Contrary to common belief, the study observed that T2DM patients have adequate Diabetes Education and knowledge to facilitate proper care. Knowledge for purposes of care was satisfactory, though deep academic knowledge about the pathophysiology of diabetes was poor. Beliefs were not detrimental to health. Practices were however not in concordance with knowledge due to the modulation of attitude. Despite knowledge that physical activity was a requirement in T2DM care, almost all T2DM were using motorized transport even over short distances. Moreover, the T2DM are aware of negative impact of junk food, but would not stop taking them wherever an opportunity arises. Explanation about poor practices were either not substantiated or were based on attitude that favors easy good life.

### Socioeconomic and Healthcare infrastructure

Most T2DM from primary healthcare settings were generally poor economically, but were not making attempts to optimize T2DM care through cheaper natural diet and free physical activity; instead, they would take every opportunity to come out of poverty stereotype by adopting life of affluence due to cultural nuances. Further, despite health facility being within close proximity, missed clinic appointments were common, and usage of over the counter medications to treat T2DM and complications was habitual. This is despite knowledge that T2DM needs to be monitored by experts on a regular basis. Negative attitude about the affordable public health facilities as opposed to private facilities is common. The stereotype that well to do patients go to private hospital is common.

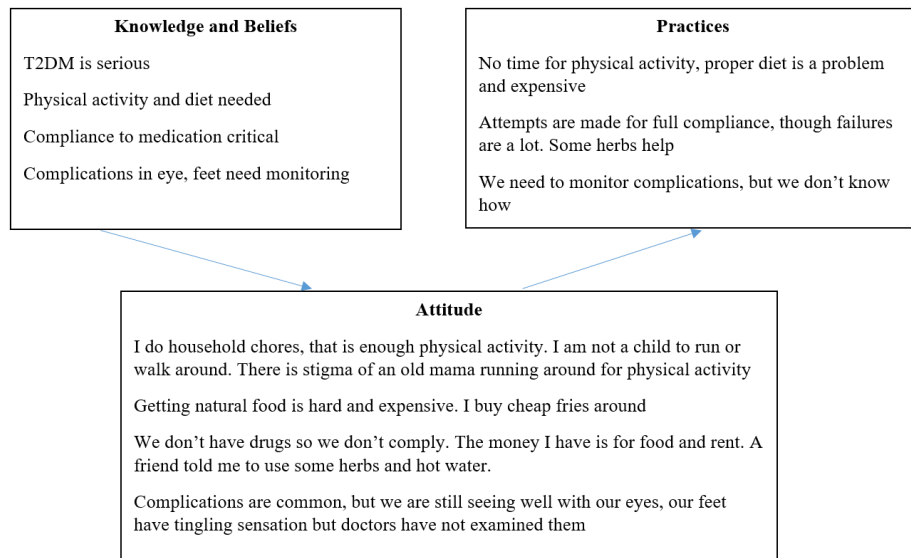


Figure 1: Qualitative Findings from Focus Group Discussions corroborated by Key Informant Interviews.

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It was however clear that Healthcare infrastructure has challenges of prolonged waiting time, inadequate services and occasionally poor communication. Again, attitude of care providers towards work could explain most challenges. Imprudence in use of health resources including time and other treatment resources due to negative attitude towards work were real issues. Failure in treatment of T2DM was blamed on either socioeconomic or healthcare deficiencies, and NEVER on self.

## Discussion

Eagly and Chaiken, 1993, define attitude as a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor [4]. They noted that attitude is influenced by life experiences, and it in turns determines behavior. However, the two component of attitude-implicit and explicit are at times conflicted in the way they influence behavior, leading to Cognitive dissonance - awareness that knowledge and practice are inconsistent [8]. In other words, Knowledge, culture, beliefs, Socioeconomic factors and healthcare infrastructure would influence attitude towards T2DM care, eventually leading to certain behaviors and practices. As this study found, T2DM patients are aware of the importance of daily physical activity, but avoid doing so despite this awareness – Cognitive dissonance. The centrality of attitude in shaping chronic care behavior and therefore quality management is espoused by Mantyselka et al., 2019, when he found out that attitude is the pathway through which knowledge, beliefs, and healthcare issues influence lifestyle change in primary healthcare [9].

In essence, paradoxes found in this study and in literature related to suboptimal T2DM risk factor management can be explained through attitude. Knowledge about importance of physical activity was adequate, but physical activity levels are very low despite ample opportunity to do so. In a Low and Middle Income economy, the expectation is that physical activity like walking to work is free and should be common, but that is not the case paradoxically. A LMIC like Kenya is basically an agricultural economy [10], meaning natural diabetes friendly diet is abundant. However, consumption of diabetic diets amongst T2DM is below expectation [11]. These paradoxes confirm the implicit attitude nexus to physical activity and high obesity in LMIC as observed in literature {Muschalik, 2019, Does the discrepancy between implicit and explicit attitudes moderate the relationships between explicit attitude and (intention to) being physically active?} [12]. It is unfathomable that T2DM and associated risk factors such as obesity, sedentary lifestyle and poor diet is rising in rural areas in LMIC despite such areas being agricultural zones with sufficient natural food and non-mechanized modes of cultivation [2,13]. Haddock and Maio, 2008, concluded that cognitive component of attitude would influence behavior in the sense that explicit attitude, the deliberate component recognizes beneficial behavior, but the implicit component, the automatic one can discourage beneficial behavior based on past outcomes and long term memory [4]. At the same time, sociocultural belief of associating success with sedentary lifestyle and overweight with affluence and success in life is the cognitive aspect that contributes to negative attitude towards physical activity and lean weight,

despite adequate knowledge about the dangers. This is cognitive dissonance in attitude, conflicting choice between doing what is in concordance with T2DM care or what sociocultural dictates prefer. Compared to most of the other care determinants like knowledge and Practices, attitude is difficult to measure [14]. It is however pivotal and quintessential in translating personal attributes and situations into meaningful contributions in T2DM care. The quiddity of attitude, as exemplified by paradoxical T2DM behaviors is evident in its influence on lifestyle change towards negative or positive health behavior. Its psychological ubiquitousness in influencing determinants of T2DM care makes it a subtle but critical factor; especially considering that T2DM is a chronic disease with sometimes deceptive and prolonged lag period before serious debilitating complications sets in.

## Conclusion

T2DM needs assessment, and therefore chronic diseases care should be cognizant of the impact of attitude, its components and its nuances on the practicability of quality improvement. It is the nexus to desired self-care practices and healthcare delivery. Challenges of indirect measurement notwithstanding, proper contextualization of attitude and its components is key if care determinants such as self-care, socioeconomic and Healthcare factors are to be harnessed to yield positive health response. Panoptic view of attitude in needs assessment to encompass psychological undertones that are impactful in T2DM needs is important in compendious care.

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