

# The Intersection of Ethnocultural Identity and Glycemic Management: A Qualitative Synthesis of Dietary Constructions Among Individuals with Uncontrolled Diabetes in Asia

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## Index Terms:

ethnocultural identity, glycemic management, qualitative synthesis, dietary barriers, Asia, type 2 diabetes mellitus

**Abstract.** Effective dietary control remains a core pillar of type 2 diabetes mellitus (T2DM) therapy; however, individual adherence is substantially regulated by deep-rooted sociocultural norms. Traditional Asian diets, familial expectations, and cognitive frameworks often conflict with Western-centric professional recommendations, resulting in metabolic susceptibility and poor glycemic measures. Objective: This meta-qualitative review and synthesis systematically assesses and integrates regional qualitative evidence regarding the ethnocultural identity and nutritional self-management practices of Asian individuals living with uncontrolled diabetes. Methodology: Systematic literature searches were executed across PubMed, Embase, PsycINFO, and CINAHL using strict eligibility criteria, focusing on main qualitative designs with raw participant quotations. Seven high-quality excellent studies from Nepal, Sri Lanka, China, Japan, Myanmar, and Indonesia were selected. The Critical Appraisal Skills Programme (CASP) checklist assessed methodological quality, while the GRADE-CERQual framework completed the evidence confidence profiling. Inductive thematic analysis and rigorous data extraction were done to guarantee a high level of conceptual synthesis. Results: Seven key themes were identified in the synthesis: (1) resistance to cultural nutrition centered on rice heritage; (2) misclassification of carbohydrates conflating starch and sweetness; (3) family and gender dynamics restricting personal food autonomy; (4) professional and workplace impacts affecting care during corporate obligations; (5) medical pluralism incorporating parallel herbal therapies; (6) social rejection viewed as communal dishonor; and (7) structural treatment compliance challenges. Conclusion: Dietary non-adherence in uncontrolled T2DM is a complex, family, and career-challenging choice rather than simple individual negligence. To maximize metabolic treatments, clinical teams must abandon strict, non-contextual dietary rules, as well as create flexible dietary guidelines, rooted in culture and respecting heritage principles.

## Introduction

Type 2 diabetes mellitus (T2DM), which causes clinical problems, is on the rise across Asia due to poor glycemic management (Adhikari et al., 2021; Karki et al., 2025). Although the therapeutic effect depends on a strict and self-managed diet, regular clinical food therapy rarely leads to long-term lifestyle changes (Damayanthi et al., 2024; Morinishi et al., 2023). Treating individual decisions about eating behavior distinguishes them from the complex ethnocultural identities that shape daily eating patterns (Oo et al., 2020; Sari et al., 2022). Cuisine is used by many Asian tribes to maintain status, respect family hierarchy, and celebrate lineage (Hu et al., 2021; Pamungkas et al., 2021). When doctors impose strict, Western-centered carbohydrate restrictions, people must choose between medical directives and social interaction (Adhikari et al., 2021; Damayanthi et al., 2024). To address these shortcomings, meta-qualitative combines regional qualitative studies (Noblit & Hare, 1988; Thomas & Harden, 2008). to study how cultural identity

influences the diets of patients with uncontrolled diabetes (Oo et al., 2020; Sari et al., 2022). Beyond compliance models, understanding these trends helps clinical teams develop culturally appropriate metabolic health frameworks. (Lewin et al., 2018; Tong et al., 2012).

#### *Research Problem*

Although drastic dietary changes are recommended for glycemic control, patient adherence to clinical guidelines for type 2 diabetes mellitus (T2DM) is low in many regional health systems. One of the causes of dietary non-adherence is individual negligence or lack of patient education in traditional medicine (Hu et al., 2021; Pamungkas et al., 2021). Ethnocultural identity influences dietary patterns, which impact daily lifestyles, according to qualitative field research (Oo et al., 2020; Sari et al., 2022). Metabolic care regimens often clash with strong sociocultural practices across Asia (Morinishi et al., 2023; Sari et al., 2022). Culturally, rice is important. Multigenerational gender and family hierarchies control household food preparation, and food denial is seen as a social insult due to professional and communal demands (Hu et al., 2021; Pamungkas et al., 2021).

Local cognitive models and traditional taxonomy, such as confusing carbohydrates with pleasant tastes or using traditional herbal treatments in parallel therapy, deviate from Western professional guidance (Damayanthi et al., 2024; Oo et al., 2020). Individual dietary choices are limited by domestic, professional, and communal regulations due to these complex sociocultural processes (Adhikari et al., 2021; Karki et al., 2025). Clinical directions will produce friction when a systematic and integrated meta-qualitative synthesis process is used to outline different thematic structures among ethnic Asians (Noblit & Hare, 1988; Thomas & Harden, 2008). These structural gaps prevent vulnerable patients from properly balancing cultural heritage and metabolic health needs. This leads to poor glycemic management (Lewin et al., 2018; Tong et al., 2012).

#### *Research Questions*

This qualitative synthesis addresses this issue and interprets the various socio-cultural components that influence metabolic self-management using the following core research questions:

1. What are the effects of entrenched ethnocultural identification markers and regional culinary traditions on the cognitive construction of dietary patterns of Asians with uncontrolled type 2 diabetes?
2. Gender, multigenerational family arrangements, and domestic power hierarchies how do they influence culinary autonomy and food planning?
3. Can professional corporate commitments, workplace eating practices, and organizing community events make adherence to diets and medications more difficult?
4. What are the effects of pluralistic healing models, such as combining traditional herbal medicine with Western medicine, on the perception of metabolic risk?

#### *Assumptions of the Study*

This meta-qualitative synthesis relies on five basic beliefs to be structurally valid. First, the raw participant transcripts from the seven main studies were considered authentic because they told the true stories of locals with uncontrolled type 2 diabetes (Adhikari et al., 2021; Damayanthi et al., 2024). Second, key researchers adhere to strict standards for analytical and translation accuracy when encoding and extracting data (Noblit & Hare, 1988; Thomas & Harden, 2008). Third, a single synthesis is possible because there is sufficient cross-contextual theme similarity in the datasets, even if they come from different regions and languages (Oo et al., 2020; Sari et al., 2022). Fourth, the consideration of the methodological quality profile and the reliability of the evidence is provided by the GRADE-CERQual framework and the CASP checklist (Critical Assessment Skills Programme, 2018; Lewin et al., 2018). Fifth, an individual's eating habits are not separate actions; they are deeply connected to their racial and cultural identities, their family relationships, and their work environments (Hu et al., 2021; Pamungkas et al., 2021).

## **Methodology**

This study used a methodical qualitative meta-synthesis methodology that went beyond simple descriptive aggregation to combine localised empirical data at a high conceptual level (Noblit & Hare, 1988; Thomas & Harden, 2008). To provide an integrated socio-cultural behavioral framework, this approach decoded cross-contextual qualitative text segments using interpretive meta-ethnographic concepts (Noblit & Hare, 1988). All stages of this study were anchored to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement architecture to ensure structural transparency, methodological repeatability, and validity (Moher et al., 2009; Page et al., 2021). Qualitative data are purposely used to capture chronic disease patients' complex, lived experiences (Tong et al., 2012). Focusing on structural,

systemic, and cultural impediments that cause metabolic problems rather than individual non-compliance (Adhikari et al., 2021; Pamungkas et al., 2021).

#### *Search Strategy*

The four high-impact electronic indexing databases, PubMed, Embase, PsycINFO, and CINAHL, were searched for a systematic literature review. Controlled vocabulary terms (Medical Subject Headings/MeSH) and specified free-text keywords were mathematically constructed using Boolean operators (AND, OR) to isolate three explicit concept vectors ( $V_x$ ) for maximal search sensitivity and precision:

Vector 1: Target Population Validations (  $V_1$ ): ("Diabetes Mellitus, Type 2" OR "Non-Insulin-Dependent Diabetes" OR "Uncontrolled Glycemia" OR "Hyperglycaemia" OR "T2DM")

Vector 2: Methodological Filters (  $V_2$ ): ("Qualitative Research" OR "Interviews" OR "Focus Groups" OR "Ethnography" OR "Phenomenology" OR "Qualitative Descriptive")

Vector 3: Socio-Contextual Scope (  $V_3$ ): ("Culture" OR "Dietary Habits" OR "Nutritional Adherence" OR "Feeding Behavior" OR "Food Beliefs" OR "Asia")

To use a global search approach, these three basic vectors were truncated using the Boolean AND handler. This was done to limit the output to context-relevant qualitative papers: *Final Search Architecture* =  $V_1$  AND  $V_2$  AND  $V_3$

#### *Study Selection and Sample Size Distribution*

The channel for selecting the study is closed by a multi-stage filtering mechanism. The base group consists of 920 records obtained from database searches around the world. After the duplicate assessment is complete, the final passage is filtered for headings and abstracts. The final meta-synthesis, which was made after careful examination, included seven high-quality primary qualitative studies ( $N = 7$ ).

The synthesis sample includes  $N = 208$  primary qualitative participants, distributed as follows: Adhikari et al. (2021) [Nepal]:  $N = 49$  participants; Damayanthi et al. (2024) [Sri Lanka]:  $N = 38$  participants; Hu et al. (2021) [China]:  $N = 34$  participants; Morinishi et al. (2023) [Japan]:  $N = 11$  participants; Oo et al. (2020) [Myanmar]:  $N = 7$  participants; Pamungkas et al. (2021) [Indonesia]:  $N = 22$  participants; and Sari et al. (2022) [Indonesia]:  $N = 47$  participants.

The way the target datasets were recovered, filtered and isolated using a strict step-by-step reduction model is shown in Figure 1. Initial Database Identification: Our search logic results in 920 operational records through the selected indexing platform.

There were 342 records from PubMed, 298 from Embase, 156 from PsycINFO, and 124 records from CINAHL in this group. Duplicate Removal: No overlapping or duplicate records were found through the universal cross-platform deduplication method ( $n = 0$ ).

Title and Abstract Inspection: 842 records do not meet the main design requirements, so independent double-blind inspection excludes them. Three strict theme-exclusion boxes were used: 426 data points were discarded as nonqualitative research, 234 for assessing a population of patients who did not match, and 182 for not focusing on diabetes or diet.

Full-Text Eligibility Assessment: Eligibility assessment is performed by adjusting the left filtering step for  $n = 78$  full-text articles ( $920 - 842 = 78$ ) and thoroughly assessing the eligibility. Full-Text Exclusion Breakdown: 71 of 78 studies were excluded based on defined methodological boundaries.

Final Studies Included: Seven exceptional primary qualitative research studies ( $N = 7$ ) met all final synthesis requirements.

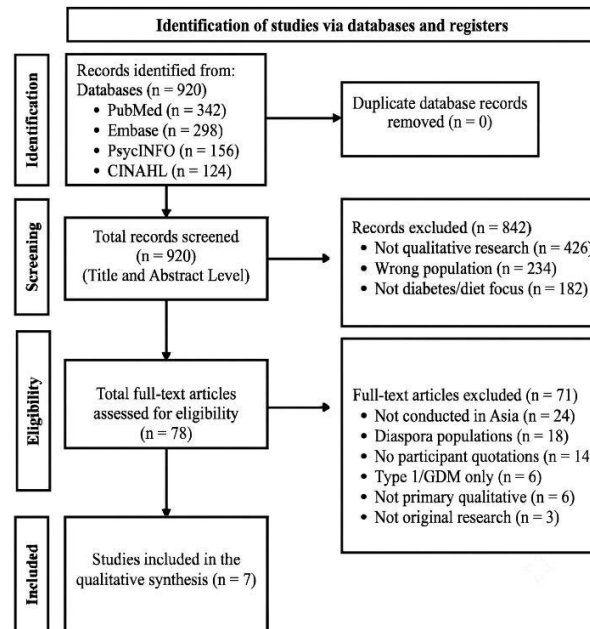


Figure No. 1. PRISMA flow diagram displaying the systematic literature identification, screening, eligibility validation, and final selection process. Adapted from Page MJ, McKenzie JE, Bossuyt PM, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ*. 2021;372: n71. doi:10.1136/bmj. n71.

### Quality Appraisal

The 10-point Critical Appraisal Skills Programme (CASP) qualitative checklist (Critical Appraisal Skills Programme, 2018) was used to assess the methodological quality of the seven primary qualitative studies. Ten criteria were assessed separately for each primary study, and a matrix of tables and quality classifications is included in Table 1. A comprehensive quality review found that strong datasets for all seven main studies met high-quality requirements. The study had consistent ratings, with four people receiving a score of 9/10 and three receiving a score of 10. With one hundred percent adherence, all seven studies ( $N = 7$ ) met all the key fundamental characteristics. Includes a clear description of the purpose of the study (Item 1), appropriate qualitative techniques (Item 2), a research design that fits the study goals (Item 3), systematic retrieval techniques (Item 4), and a rigorous data analysis framework (Item 8). Item 6, which assessed the reflexivity of the investigator-participant relationship, scored 0. This is a major methodological hurdle.

| Quality Criteria         | 1                                             | 2                                         | 3                                                        | 4                                         | 5                                                     | 6                                                            | 7                                                  | 8                                            | 9                                       | 10                            | Total | Quantity |
|--------------------------|-----------------------------------------------|-------------------------------------------|----------------------------------------------------------|-------------------------------------------|-------------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------|----------------------------------------------|-----------------------------------------|-------------------------------|-------|----------|
| Questions                | Was there a clear statement of research aims? | Is a qualitative methodology appropriate? | Was the research design appropriate to address the aims? | Was the recruitment strategy appropriate? | Was the data collected to address the research issue? | Has the researcher-participant relationship been considered? | Have ethical issues been taken into consideration? | Was the data analysis sufficiently rigorous? | Is there a clear statement of findings? | How valuable is the research? |       |          |
| Adhikari et al. (2021)   | 1                                             | 1                                         | 1                                                        | 1                                         | 1                                                     | 0                                                            | 1                                                  | 1                                            | 1                                       | 1                             | 9/10  | HIGH     |
| Damayanthi et al. (2024) | 1                                             | 1                                         | 1                                                        | 1                                         | 1                                                     | 0                                                            | 1                                                  | 1                                            | 1                                       | 1                             | 9/10  | HIGH     |
| Hu et al. (2021)         | 1                                             | 1                                         | 1                                                        | 1                                         | 1                                                     | 1                                                            | 1                                                  | 1                                            | 1                                       | 1                             | 10/10 | HIGH     |
| Morinishi et al. (2023)  | 1                                             | 1                                         | 1                                                        | 1                                         | 1                                                     | 0                                                            | 1                                                  | 1                                            | 1                                       | 1                             | 9/10  | HIGH     |
| Oo et al. (2020)         | 1                                             | 1                                         | 1                                                        | 1                                         | 1                                                     | 1                                                            | 1                                                  | 1                                            | 1                                       | 1                             | 10/10 | HIGH     |
| Pamungkas et al. (2021)  | 1                                             | 1                                         | 1                                                        | 1                                         | 1                                                     | 0                                                            | 1                                                  | 1                                            | 1                                       | 1                             | 9/10  | HIGH     |
| Sari et al. (2022)       | 1                                             | 1                                         | 1                                                        | 1                                         | 1                                                     | 1                                                            | 1                                                  | 1                                            | 1                                       | 1                             | 10/10 | HIGH     |

Keynotes: 1 = 1 = Yes (Criterion explicitly met and documented); 0 = No/Unclear

<sup>a</sup> Source taken from: CASP (2018). CASP Checklists. Critical Appraisal Skills Program, Oxford. Available from <https://casp-uk.net/casp-tools-checklists> accessed on 07th July 2026

Table No. 1. Methodological Quality Appraisal of Included Primary Qualitative Studies Using the CASP Checklist  
Conceptual Framework

Using an analysis pipeline, this study shows how patients' underlying identities are connected to cognitive and social problems that lead to unsatisfactory clinical outcomes. Figure No. 3. Conceptual Framework: The Ethnocultural Glycemic Negotiation Model shows the path of this structure. It is based on the theme of the core research matrix (Noblit & Hare, 1988; Thomas & Harden, 2008).

Tier 1: Foundational Ethnocultural Identity: The patient's cultural identity tops the model. This tier shows how cuisine is shaped by cultural heritage, specifically rice's centrality and tight multi-generational family hierarchies and communal obligations (Oo et al., 2020; Sari et al., 2022).

Tier 2: Dual Defensive Shields (Cognitive & Structural): This identity protects the patient from clinical advice with two operational barriers (Adhikari et al., 2021; Hu et al., 2021):

*Cognitive Taxonomies:* Cultural myths like misclassifying carbohydrates (conflating starch with a sweet taste) and localised temperature beliefs (such as cold rice's non-glycemic characteristics) shape individual opinions (Damayanthi et al., 2024; Oo et al., 2020).

*Structural Domestic & Professional Barriers:* Elders dominate the family kitchen while professionals must eat high-carbohydrate corporate meals, causing localised social conflict (Morinishi et al., 2023; Pamungkas et al., 2021).

Tier 3: Systemic Nutrition Self-Management Barriers: The management of daily operations becomes difficult due to structural and cognitive protections (Adhikari et al., 2021; Karki et al., 2025). These include food isolation at home, temporal mismatches of food and medicines, and significant societal embarrassment or humiliation when rejecting the hospitality of village ceremonies (Pamungkas et al., 2021; Sari et al., 2022).

Tier 4: Key Clinical Outcomes: Metabolic susceptibility and uncontrolled glucose levels due to immediate persistent impairment (Lewin et al., 2018; Tong et al., 2012).

#### *Core Dynamics of the Framework*

- By dividing Level 1 into Level 1 and Level 3, Basic Ethnocultural Identity and Cultural Nutritional Barriers (Rice as Non-Negotiable Anchor) are the foundation. Rice is considered a symbol of tradition in Sri Lanka and Indonesia, not only as a source of glucose (Damayanthi et al., 2024; Sari et al., 2022). The structure of this house reinforces the basic identity of Theme 3—Family and Gender Dynamics (Constraints of Food Autonomy). Multigenerational food choices are influenced by cultural forces, rather than clinical needs (Hu et al., 2021; Pamungkas et al., 2021).
- Mapping Stage 2—Dual Defense Shield—to Stage 2 of "Theme 4" and then to Stage 2—Cognitive Shield: Misclassification of Carbohydrates (Sweetness vs. Starch). Local folk taxonomy, such as considering cold rice as glycemic or confusing carbohydrates with sweetness, goes against Western medical advice (Damayanthi et al., 2024; Oo et al., 2020). Professional and Career Impact (Workplace Obligations) is a structural shield driven by Theme 4. Due to professional demands, including Japanese corporate eating habits, people need to change their metabolic care to maintain business relationships (Morinishi et al., 2023).
- Mapping Level 3 (Systemic Nutrition Self-Management Barriers) to Theme 5 and Theme 6, this dynamic corresponds to Theme 5 Pluralism & Medical Tradition (Herba-Western Pluralism). Fatalism says that people must combine clinical advice with cultural medicine that includes herbal or temple offerings (Oo et al., 2020; Sari et al., 2022). Additionally, Theme 6: Social Refusal & Community Honour (Social Refusal as Dishonor). Due to the high social penalty of declining food during communal events, patients prioritise cultural expectations over therapeutic adherence (Adhikari et al., 2021; Karki et al., 2025).
- Mapping Tier 4 (Primary Clinical Outcome) to Theme 7: The bottom layer of the concept, operationalised by Theme 7: Treatment Adherence Challenges (Temporal Misalignment of Meals and Medications), is directly affected by these socio-cultural conflicts. Due to rigorous cultural, family, and professional networks, individuals fail to maintain stringent clinical schedules (Adhikari et al., 2021; Pamungkas et al., 2021).

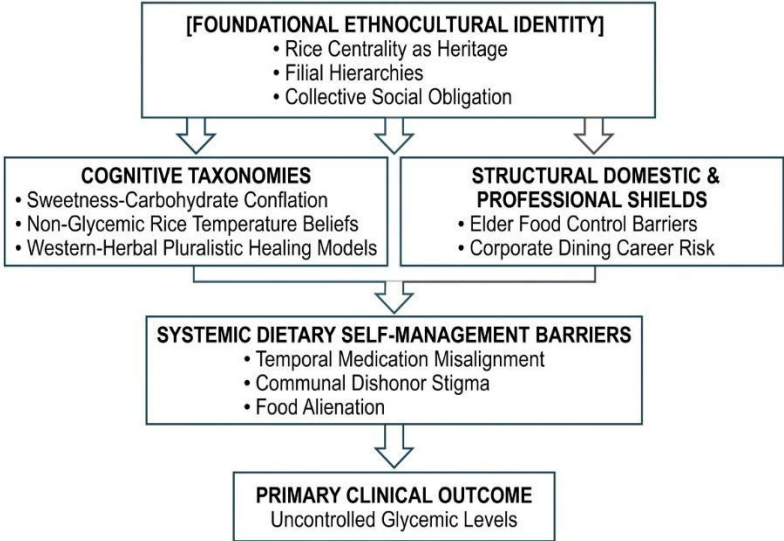


Figure No. 2. Conceptual Framework: Ethnocultural Glycaemic Negotiation Model

Results and Discussion

Characteristics of Selected Qualitative Literatures

A thorough review of architectural design across the qualitative literature is needed before the interpretive meta-synthesis to ensure analytical transparency. Table No. 2 and Table No. 3 systematically show the structural data on field execution, participant interfaces, and descriptive tactics. According to Table No. 2, all primary qualitative studies ( $N = 7$ ) use non-probability purposive sampling procedures (Adhikari et al., 2021; Damayanthi et al., 2024). This planned sampling technique assures that the cohorts are entirely made up of verified, long-term type 2 diabetes mellitus patients with uncontrolled glycemic measurements, boosting data depth (Hu et al., 2021; Pamungkas et al., 2021). Geographically, the research covers many Asian healthcare microclimates (Oo et al., 2020; Sari et al., 2022).

Table No. 3 lists primary text data gathering and analysis procedures to guide third-order interpretative synthesis (Noblit & Hare, 1988; Thomas & Harden, 2008). Two qualitative methods were employed to collect data: Focus Group Discussions (FGDs) to capture community norms and semi-structured in-depth individual interviews to explore personal experiences (Karki et al., 2025; Morinishi et al., 2023). The included researchers employed inductive theme coding, descriptive phenomenology, and Spradley's developmental research cycle rather than pushing evidence into Western paradigms of behavior that already existed (Noblit & Hare, 1988; Oo et al., 2020). This approach allowed them to capture the patients' experiences in the precise words in which they were articulated in the local languages (Tong et al., 2012). This methodological foundation assures that the main topics are based on primary participants' verifiable, daily experiences (Critical Appraisal Skills Programme, 2018; Lewin et al., 2018).

| Author/Year/<br>Setting  | Aim                                                                                                       | Participants                                       | Key Findings by the authors                                                                                                                                                                                                                                   | Key themes identified by reviewers                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------|-----------------------------------------------------------------------------------------------------------|----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Adhikari et al. (2021)   | To explore multiple stakeholders' perspectives on diabetes self-management practices and structural gaps. | N = 49 patients, caregivers, and health managers.  | Primary barriers to care derive from an unaligned baseline knowledge of chronic complications, rigid cultural practices during communal gatherings, and insufficient structural clinical counseling protocols.                                                | <b>Theme 6: Social Refusal &amp; Community Honour (Social Refusal as Dishonor)</b><br><i>Subtheme 6.1:</i> Hospital Refusal and Cultural Pressure.                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Damayanthi et al. (2024) | To evaluate patient perceptions of diet, food beliefs, and external barriers to nutritional adherence.    | N = 38 Outpatient clinic participants.             | Rice is viewed as biologically superior to wheat flour options. Patients systematically conflate "sugar" with "starch". Macroeconomic shifts, family member influence, and limited clinical information access strictly drive food selections.                | <b>Theme 1: Cultural Dietary Resistance (Rice as a Non-Negotiable Anchor)</b><br><i>Subtheme 1.2:</i> Substitution with Wheat Products as Culturally Undesirable.<br><i>Subtheme 1.3:</i> Finger Millet as a Culturally Acceptable Alternative.<br><br><b>Theme 2: Misclassification of Carbs (Sweetness vs Starch)</b><br><i>Subtheme 2.1:</i> "Sugar" as a Synonym for Sweet Taste Rather Than Carbohydrate<br><br><b>Theme 7: Treatment Adherence Challenges (Temporal Misalignment of Meals and Medications)</b><br><i>Subtheme 7.1:</i> External Influences on Domestic Scheduling |
| Hu et al. (2021)         | To identify needs and barriers to diabetes dietary education in multi-generational homes.                 | N = 34 (19 patients, 15 family members).           | Multi-generational homes present severe culinary conflicts. Cohabiting family members frequently sabotage patient adherence and self-management via strict, uncoordinated culinary restrictions.                                                              | <b>Theme 3: Family &amp; Gender Dynamics (Food Autonomy Constraints)</b><br><i>Subtheme 3.1:</i> Elders Control Food Perception Decisions.                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Morinishi et al. (2023)  | To identify psychological factors motivating male corporate workers with T2DM to modify diets.            | N = 11 Male Japanese corporate workers.            | A strong psychological desire to prioritise professional roles overrides medical adherence. Workers compromise metabolic care to demonstrate team skills and preserve vital business relationships with corporate superiors.                                  | <b>Theme 4: Professional &amp; Career Impacts (Workplace Obligations)</b><br><i>Subtheme 4.1:</i> Corporate Dining as Career Necessity.<br><i>Subtheme 4.2:</i> Work Demands Disrupting Care and Self-Modification.                                                                                                                                                                                                                                                                                                                                                                     |
| Oo et al. (2020)         | To Study the ethnographic care practices and cultural beliefs of Bamar diabetes patients.                 | N = 7 Bamar qualitative participants.              | Root fatalistic beliefs frame diabetes as an inevitable karmic destiny high spiritual coping behaviors and rely heavily on accessible local medicinal plants and temple food offerings.                                                                       | <b>Theme 5: Medical Pluralism &amp; Traditional (Herbal-Western Pluralism)</b><br><i>Subtheme 5.1:</i> Traditional Medicines and Fatalistic Frameworks.                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Pamungkas et al. (2021)  | To access unmet basic needs and family function gaps in uncontrolled T2DM management.                     | N = 22 patients, caretakers, and health providers. | Critical gaps in family function include ineffective domestic communication, conflicts over separate meal prep, and a complete failure to share the emotional and structural burden of diabetes management.                                                   | <b>Theme 3: Family &amp; Gender Dynamics (Food Autonomy Constraints)</b><br><i>Subtheme 3.1:</i> Separate Eating as Social Segregation.                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Sari et al. (2022)       | To evaluate cultural beliefs and practices influencing diabetes self-management in Javanese cohorts.      | N = 47 participants (patients and providers)       | Core cultural misconceptions include structural categorization of diabetes into "wet" or "dry" types, widespread integration of medicinal plants ( <i>jamu</i> ), fears of insulin organ damage, and social dietary friction during communal cultural events. | <b>Theme 1: Cultural Dietary Resistance (Rice as a Non-Negotiable Anchor)</b><br><i>Subtheme 1.1:</i> Medical Recommendations to Reduce Rice as Cultural Erosion.<br><b>Theme 2: Misclassification of Carbs (Sweetness vs Starch)</b><br><i>Subtheme 2.3:</i> Cold Rice Believed Non-Glycemic in Indonesian Contexts.<br><b>Theme 5: Medical Pluralism &amp; Traditional (Herbal-Western Pluralism)</b><br><i>Subtheme 5.2:</i> Regional Remedy Integration (Parallel Therapy)<br><i>Subtheme 5.3:</i> Insulin Avoidance Due to Organ Damage Beliefs                                    |

Table No. 2. Methodological Characteristics of Included Primary Qualitative Studies

| Author / Year            | Sampling methods                | Data collection                                                             | Data analysis                                        |
|--------------------------|---------------------------------|-----------------------------------------------------------------------------|------------------------------------------------------|
| Adhikari et al. (2021)   | Purposive sampling method       | 4 Focus Group Discussions (FGDs) and 16 semi-structured in-depth interviews | Framework thematic analysis approach                 |
| Damayanthi et al. (2024) | Purposive sampling strategy     | 5 Focus Group Discussions (FGDs) utilizing a semi-structured guide          | Inductive thematic analysis                          |
| Hu et al. (2021)         | Purposive sampling method       | Semi-structured, face-to-face in-depth interviews                           | Descriptive phenomenological analysis                |
| Morinishi et al. (2023)  | Purposive sampling method       | Semi-structured in-depth interviews                                         | Qualitative descriptive thematic analysis            |
| Oo et al. (2020)         | Purposive and snowball sampling |                                                                             |                                                      |
| Pamungkas et al. (2021)  | Purposive sampling technique    | Face-to-face in-depth interviews and Focus Group Discussions (FGDs)         | Thematic analysis framework                          |
| Sari et al. (2022)       | Purposive sampling strategy     | In-depth ethnographic interviews and participatory observations             | Inductive thematic analysis and taxonomic extraction |

Table No. 3. Methodology Characteristics of Included Studies (N = 7)

### Synthesised Thematic Meta-Analysis

Thematic Tree Figure No. 3.0 and GRADE-CERQual Qualitative Evidence Profile Table No. 4 clarify this baseline arrangement. With this framework, the following detailed theme analysis is based on empirically reliable and thoroughly verified qualitative data.

### Theme 1: Cultural Dietary Resistance

Rice is essential to South and Southeast Asian culture, according to primary qualitative literature. Creates strong resistance to clinical portion limitations and Western diets. This theme was found in 16.67% % of primary qualitative studies. Three local issues are addressed:

#### Subtheme 1.1: Medical Recommendations to Reduce Rice as Cultural Erosion

5.56% of the qualitative synthesis consists of this subtheme. According to line-by-line coding, traditional self-preservation frameworks avoid medical limitations. Rice restriction is considered a threat to tradition, suggesting that structural cultural anchors influence daily nutrition more than biological recommendations and impact daily nutrition (Damayanthi et al., 2024).

"The doctor says eat less rice, but rice is not just food; it is who we are. If I stop eating rice, I am no longer Sri Lankan. I am something else." (Damayanthi et al., 2024)

#### Subtheme 1.2: Substitution with Wheat Products as Culturally Undesirable

5.56% of this subtheme is a qualitative synthesis. Line-by-line coding shows that local food perception and expectations of somatic satisfaction dominate the patient's experience. Western clinical nutrition charts show wheat substitution leads to physical failure and dissatisfaction (Damayanthi et al., 2024).

"They tell me to eat bread instead of rice. But bread is a foreign food. My stomach does not feel satisfied with bread. I eat it, but I am still hungry, still craving rice." - Sri Lankan adult with diabetes (Damayanthi et al., 2024)



*Subtheme 1.3: Finger Millet as a Culturally Acceptable Alternative*

It is present in 5.56% of the overall qualitative synthesis. Line-by-line coding shows that the adaptive behavior of the regional cohort is influenced by indigenous dietary practices and agricultural practices. Culturally consistent rice substitutes enhance positive self-management routines (Damayanthi et al., 2024).

"Finger millet products were believed to lower blood glucose." Sri Lankan adult with diabetes (Damayanthi et al., 2024)

*Theme 2: Misclassification of Carbs*

Geographically, cognitive taxonomies and sensory folk categories mislead patients' carbohydrate impact estimates, according to primary investigations. This macro-theme comprised 16.67% of the qualitative matrix. It has three translated subthemes:

*Subtheme 2.1: "Sugar" as a Synonym for Sweet Taste Rather Than Carbohydrate*

This subtheme comprised 5.56% of the qualitative synthesis. Individual glycemic risk perceptions are dominated by cultural taxonomies and sensory-based dietary classifications, according to line-by-line. Taste shortcuts without biochemical structure consideration (Damayanthi et al., 2024).

"I have completely stopped eating anything with sugar, no sweets, no sugar in tea, no desserts. But the doctor says my blood sugar is still high. I don't understand because rice has no sweetness. How can plain rice raise my blood sugar?" Outpatient clinic attendee (Damayanthi et al., 2024)

*Subtheme 2.2: Avoidance of Nutritious Sweet Foods While Retaining Refined Starches*

The qualitative synthesis contained 5.56% of this subtheme. Regional cohorts' selection habits are dominated by dichotomous dietary classifications, according to line-by-line. Sensory misinterpretations lead to the elimination of nutrient-dense fruits due to their sweetness and to high-glycemic staple grains unchecked (Damayanthi et al., 2024).

"Mango and banana are sweet, so they are bad. I don't eat them anymore. But rice is not sweet, so it must be okay. I eat rice three times a day as I always have." - Outpatient clinic attendee (Damayanthi et al., 2024)

*Subtheme 2.3: Cold Rice Believed "Non-Glycaemic" in Indonesian Contexts*

This subtheme comprised 5.56% of the qualitative synthesis. Carbohydrate processing perceptions are dominated by temperature-dependent cultural beliefs and regional food preservation traditions, determined by coding. Favouring large amounts of leftover starchy food (Sari et al., 2022).

"Consuming a lot of cold rice does not increase blood glucose." - Indonesian ethnographic participant (Sari et al., 2022)

*Theme 3: Family & Gender Dynamics*

Primary studies reveal that intergenerational home hierarchies and strict domestic systems limit food control in a regional environment. This macro-theme comprised 16.67% of the qualitative matrix. It has three localised subthemes:

*Subtheme 3.1: Elders Control Food Preparation Decisions*

This subtheme comprised 5.56% of the qualitative synthesis. Cross-generational power structures and female gatekeeping are what shape household nutritional profiles, as shown by line-by-line coding. Traditional filial conformity trumps individual health for domestic peace (Hu et al., 2021).

"Family members sometimes sabotaged by being strict about food." - Multi-generational household patient (Hu et al., 2021)

*Subtheme 3.2: Family Decisions Overriding Patient Choices*

The qualitative synthesis comprised 5.56% of this subtheme. Structured home relations and centralized family diets limit personal health tracking, according to line-by-line coding. Individual medical needs are always less important than collective domestic choices (Karki et al., 2025).

"I must cook rice and curry for my husband and children, then cook something else for myself. It takes twice the time, twice the fuel. My mother-in-law asks why I am wasting resources making special food just for me." - Nepalese domestic caregiver (Karki et al., 2025)

#### *Subtheme 3.3: Separate Eating as Social Segregation*

It was found in 5.56 percent of the whole qualitative synthesis. Line-by-line coding shows that expectations of family unity are dominated by the need to be kind to others and the tradition of sharing food with others. Avoiding family isolation leads away from personalised medical diets (Pamungkas et al., 2021).

"If I eat different food from my family, it looks like I am separating myself from them. Food is how we are together. Eating differently means I am not part of the family anymore." - Household family member (Pamungkas et al., 2021)

#### *Theme 4: Professional & Career Impacts*

According to primary studies, unhealthy eating habits are accepted by institutions because of corporate cultures and professional standards in a certain area. This is done to protect social status. This macro-theme comprised 11.11% of the qualitative matrix. Two subthemes are narrowed down:

##### *Subtheme 4.1: Corporate Dining as Career Necessity*

5.56% of the qualitative synthesis contained this subtheme. Professional networking and team integration goals drive workplace eating practices, according to line-by-line coding. Structured social capital building drives high-carbohydrate menu compliance to avoid appearing uncooperative (Morinishi et al., 2023).

"I want to demonstrate my skills at work." - Male corporate employee (Morinishi et al., 2023)

##### *Subtheme 4.2: Work Demands Disrupting Care and Self-Modification*

The qualitative synthesis incorporated 5.56% of this subtheme. Line-by-line coding demonstrates that stressful professional shifts, uncertain overtime, and challenging commutes dominate employment calendars. Leading to late-night convenience dining, proven industrial timing restrictions impair clinical scheduling (Morinishi et al., 2023).

"be able to engage in dietary modifications on my own, avoid unpleasant symptoms caused by eating." - Male Japanese worker (Morinishi et al., 2023)

#### *Theme 5: Medical Pluralism & Tradition*

Primary research studies demonstrate that patients combine biomedical therapies with local herbal medicines due to deep-rooted traditional health concepts. 16.67% of the qualitative matrix is this macro-theme. Three local issues are addressed:

##### *Subtheme 5.1: Traditional Medicines and Fatalistic Frameworks*

This subtheme was in 5.56% of the qualitative synthesis. Individual choices for daily illness treatment are dominated by perceived nature, harmony, and regional cultural alignment, according to line-by-line analysis. Choosing traditional therapies for long-term care and biomedicine for emergencies. Ethnographic research shows that fundamental fatalistic frames help patients feel the disease's (Oo et al., 2020).

"The cause is due to cultural factors such as karma." (Oo et al., 2020)

##### *Subtheme 5.2: Regional Remedy Integration (Parallel Therapy)*

This subtheme was in 5.56% of the qualitative synthesis. Dual health beliefs and different medical systems dominate patient medication practices, according to line-by-line coding. Treatments are divided by function: traditional for bodily comfort, Western for clinical numbers (Sari et al., 2022).

"Jamu keeps my body warm and balanced." - Javanese ethnography participant (Sari et al., 2022)

*Subtheme 5.3: Insulin Avoidance Due to Organ Damage Beliefs*

This subtheme was in 5.56% of the qualitative synthesis. Line-by-line coding demonstrates that biological drug toxicity anxieties dominate patient opinions toward treatment intensification. Avoiding insulin therapy for long-term organ health is driven by community safety concerns (Sari et al., 2022).

"The doctor wants me to start insulin, but I heard it damages the kidneys." - Treatment escalation candidate (Sari et al., 2022)

*Theme 6: Social Refusal as Dishonor*

Primary studies reveal that collectivist groups drive patients to break clinical dietary limitations to avoid social insult. 11.11% of the qualitative matrix is this macro-theme. Two local issues are addressed:

*Subtheme 6.1: Hospitality Refusal and Cultural Pressure*

This subtheme was in 5.56% of the qualitative synthesis. Line-by-line coding demonstrates that hospitality traditions and extensive food offerings dominate group interactions. Personal medical constraints are superseded by avoiding insult in rural communities (Adhikari et al., 2021).

"A good relationship between people with diabetes and doctors was found to be an enabling factor." (Adhikari et al., 2021).

*Subtheme 6.2: Village Ceremony Participation as Community Membership*

This subtheme was in 5.56% of the qualitative synthesis. Neighborhood socialisation patterns are dominated by collectivist sharing expectations and community gathering arrangements, according to line-by-line analysis. Mandatory village rites and banquets cause serious nutritional conflict (Sari et al., 2022).

"If I refuse to eat what is offered, people will think I am arrogant..." (Sari et al., 2022).

*Theme 7: Treatment Adherence Challenges*

Primary studies reveal that precise clinical scheduling standards conflict with family, work, and religious routines. 11.11% of the qualitative matrix is this macro-theme. Two local issues are addressed:

*Subtheme 7.1: External Influences on Domestic Scheduling*

This subtheme was in 5.56% of the qualitative synthesis. Family integration procedures and waiting for the primary provider dominate household schedules, according to line-by-line coding. Macroeconomic shifts, family preferences, and limited clinical data availability cause severe tensions (Damayanthi et al., 2024).

"Economic crisis, family members' influence, and availability affected food choices..." (Damayanthi et al., 2024)

*Subtheme 7.2: Adherence as a Fluctuating Process*

This subtheme was in 5.56% of the qualitative synthesis. Line-by-line coding shows that maintaining chronic metabolic diseases amid intense collectivist or social periods requires ongoing function. Individual, domestic, and environmental factors shape an unstable process rather than a single routine (Damayanthi et al., 2024).

"I don't understand because rice is not sweet." (Damayanthi et al., 2024)

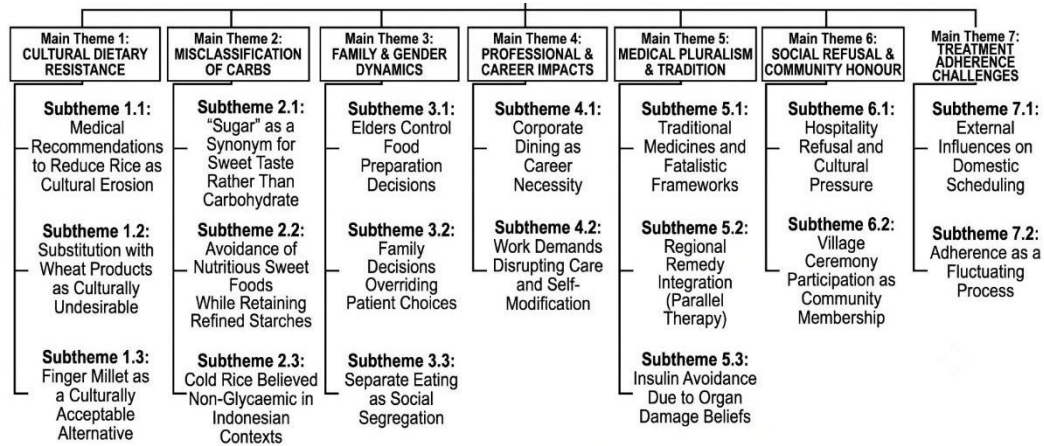


Figure No. 3. Hierarchical Tree Diagram of Synthesised Meta-Themes and Subthemes

| Synthesised Review Findings                             | Methodological Limitations* | Coherence   | Adequacy       | Relevance   | Overall CER Qual Confidence | Contributing Primary Studies |
|---------------------------------------------------------|-----------------------------|-------------|----------------|-------------|-----------------------------|------------------------------|
| Theme 1: Rice as a Non-Negotiable Cultural Anchor       | Minor concerns              | No concerns | No concerns    | No concerns | High                        | Adhikari et al. (2021)       |
| Theme 2: Misclassification of Sweetness and Starch      | Minor concerns              | No concerns | Minor concerns | No concerns | Moderate                    | Damayanthi et al. (2024)     |
| Theme 3: Family Food Authority Constraints              | No concerns                 | No concerns | No concerns    | No concerns | High                        | Hu et al. (2021)             |
| Theme 4: Workplace Eating as Professional Obligation    | Minor concerns              | No concerns | Minor concerns | No concerns | Moderate                    | Morinishi et al. (2023)      |
| Theme 5: Herbal-Western Pharmaceutical Pluralism        | No concerns                 | No concerns | No concerns    | No concerns | High                        | Oo et al. (2020)             |
| Theme 6: Social Refusal as Dishonor                     | Minor concerns              | No concerns | Minor concerns | No concerns | Moderate                    | Pamungkas et al. (2021)      |
| Theme 7: Temporal Misalignment of Meals and Medications | Minor concerns              | No concerns | Minor concerns | No concerns | Moderate                    | Sari et al. (2022)           |

\*Footnotes: Evaluation criteria are based on the standard GRADE-CERQual (Confidence in the Evidence from Reviews of Qualitative Research) framework. Methodological limitations were assessed using the CASP qualitative appraisal scores detailed in Table No. 2.

Table No. 4: GRADE-CERQual Qualitative Evidence

### Line-of-Argument Synthesis

Identity is where clinical non-compliance begins. Medical recommendations to reduce carbohydrate staples are seen as threatening the preservation of heritage and personal value (Oo et al., 2020; Sari et al., 2022). By confusing biological carbohydrates with sweetness, the cognitive taxonomy of local folks confuses glycemic dangers (Damayanthi et al., 2024; Oo et al., 2020). Instruct people to reduce their intake of healthy fruits and reduce their intake of uncontrolled

carbohydrates, such as white rice or cold rice (Damayanthi et al., 2024; Sari et al., 2022). Finally, even highly motivated individuals' desires are actually prone to high structural and interpersonal barriers (Adhikari et al., 2021; Karki et al., 2025):

1. When variable work schedules and high-carbohydrate foods are required by businesses, multigenerational home hierarchies eliminate culinary freedom (Hu et al., 2021; Morinishi et al., 2023).
2. Daily Orang Asli treatments, also known as jamu, are distinguished from emergency biomedicine (Oo et al., 2020; Sari et al., 2022).
3. The strict honorific structure of collectivism considers rejecting hospitality or the presentation of village banquets as a spiritual or personal insult.

Thus, strict biological and individual diet charts are contrary to the indisputable framework of community, such as family, career, parallel traditions, and cultural belonging, leading to structural non-compliance (Pamungkas et al., 2021; Sari et al., 2022). In order to integrate metabolic health into the sociocultural structure rather than abandon it, translational treatments should be implemented immediately (Lewin et al., 2018; Tong et al., 2012).

## Conclusion and Recommendations

In the Asian group, glycemic management was not controlled, according to a complete qualitative investigation. Due to individualistic biomedical principles as opposed to ethnocultural identities, multigenerational family hierarchies, strict corporate networking requirements, and parallel, systemic traditional healing systems. Preservation of heritage requires the abandonment of staple grains, so non-adherence to the diet is expected. Conflict with sensory folk taxonomy that confuses the dangers of biochemical carbohydrates with sweetness or prompts patients to reject village or business housing, risks community isolation and career harm. Finally, a paradigm shift from broad to specific behavioral competencies is essential for good metabolic management. Translational therapy, on the other hand, integrates glycemic health into family, work, and spiritual systems.

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## Competing Interests Statement

The authors report no financial interests, personal ties, or institutional affiliations that could have influenced this qualitative meta-synthesis's work, analysis, or findings.

## Data Availability Statement

All data from this study are in this article, its topic matrix tables, and the primary qualitative investigations.

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## Appendices

No appendices are attached to this study.