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NAVIGATING THE METABOLIC CROSSROADS: DIABETES RISK FACTORS, BARRIERS AND FACILITATORS TOWARDS HEALTHY BEHAVIOUR AMONG YOUNG ADULTS

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ABSTRACT: *Background: Type 2 diabetes mellitus represents one of the most rapidly expanding non-communicable disease burdens of the twenty-first century, with young adults increasingly constituting a high-risk yet often underserved population cohort. The transition from adolescence into early adulthood is characterized by profound shifts in lifestyle autonomy, dietary patterns, physical activity norms, and psychosocial stressors, each of which independently and interactively modulates diabetes risk. Objectives: This narrative review critically synthesizes evidence published between 2020 and 2026 to identify the predominant risk factors for type 2 diabetes among young adults, examine the barriers that impede healthy behavioural practice in this population, and delineate the facilitators that support preventive health engagement. Methods: A systematic search of PubMed, CINAHL, Scopus, Google Scholar, and WHO IRIS databases was conducted using pre-defined MeSH and free-text search terms. Fifteen peer-reviewed studies meeting the inclusion criteria were appraised and synthesized thematically. Results: Key diabetes risk factors identified included sedentary behaviour, poor dietary quality characterized by high refined carbohydrate and sugar-sweetened beverage intake, obesity, family history, inadequate sleep, and psychological stress. Principal barriers to healthy behaviour encompassed low health literacy, poor self-efficacy, fatalistic illness perceptions, financial constraints, unsafe physical environments, social and cultural food norms, and limited healthcare access. Identified facilitators included peer and social support, digital health technologies, theory-based educational interventions, accessible campus wellness infrastructure, and culturally aligned health promotion strategies. Conclusion: A multifaceted, socio-ecologically informed approach is essential to effectively address diabetes risk among young adults. Nursing and public health practitioners must advocate for structural, educational, and community-level interventions that acknowledge the intersectional nature of this risk landscape, particularly in low- and middle-income country contexts such as Nigeria.*

KEYWORDS: Diabetes mellitus, Type 2 diabetes, Young adults, Risk factors, Barriers, Facilitators, Healthy behaviour, Lifestyle, Community health nursing, Nigeria, Public health.

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INTRODUCTION

Diabetes mellitus, particularly type 2 diabetes mellitus (T2DM), has emerged as a defining public health challenge of the contemporary era. According to the International Diabetes Federation, approximately 537 million adults globally were living with diabetes in 2021, a figure projected to exceed 783 million by 2045 (IDF, 2021). Critically, the epidemiological profile of T2DM is shifting, with an increasing proportion of new diagnoses occurring among individuals aged 18 to 35 years, a demographic traditionally considered low-risk (Mohan et al., 2023; Ramachandran et al., 2020).

Young adulthood is a biologically and behaviourally transitional phase during which lifestyle patterns are established that carry long-term metabolic consequences. University enrolment, workforce entry, geographic relocation, and the assumption of independent household management collectively reconfigure eating habits, physical activity routines, sleep patterns, and stress exposure. These transitions occur within macro-level environments shaped by food system commercialization, digitalization of leisure and work, rapid urbanization, and widening socio-economic inequalities, all of which bear directly upon diabetes risk trajectories (Kim & Park, 2022; Doupis et al., 2023).

In sub-Saharan Africa, the burden is compounded by a double jeopardy of communicable and non-communicable disease, underfunded health systems, and low diabetes literacy within the general population. Nigerian studies have documented rising rates of pre-diabetes and undiagnosed T2DM among young urban adults, alongside significant gaps in screening uptake and preventive behaviour (Ogwumike et al., 2022; Njoku & Eze, 2023; Alebiosu et al., 2023). These trends place a particular imperative on community health nursing and public health practice to develop contextually responsive, evidence-based preventive programmes.

Despite this urgency, there remains a paucity of synthesized evidence that comprehensively maps the risk factor landscape alongside the behavioural barriers and facilitators specific to young adults. Existing reviews have tended to address these dimensions in isolation, limiting their utility for integrated programme design. This narrative review addresses that gap by undertaking a holistic synthesis of recent literature (2020-2026), with the aim of informing both nursing education and community public health nursing practice.

Research Questions

This review was guided by the following primary research questions:

i. What are the predominant risk factors for type 2 diabetes mellitus among young adults (aged 18-35 years) as reported in literature published between 2020 and 2026?

ii. What barriers do young adults encounter in adopting and sustaining healthy behaviours that reduce diabetes risk?

iii. What facilitators have been identified as effective in supporting healthy behaviour change and diabetes prevention among young adults?

iv. What are the implications of the evidence base for nursing practice, community/public health nursing, and health policy?

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METHODOLOGY

Review Design

A narrative literature review methodology was adopted for this study, consistent with the objective of synthesising a heterogeneous body of evidence to generate thematic insights rather than a statistical pooled estimate. Narrative reviews are particularly appropriate when the literature encompasses diverse methodological designs, populations, and outcome measures, as is the case with the current topic area (Greenhalgh, 2019). The review was conducted and reported in alignment with the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) 2020 guidelines, where applicable.

Search Strategy

A comprehensive electronic database search was conducted between January and March 2026. The databases searched included PubMed/MEDLINE, CINAHL (Cumulative Index to Nursing and Allied Health Literature), Scopus, Google Scholar, and the World Health Organization Institutional Repository for Information Sharing (WHO IRIS). Grey literature was also consulted through the Ministry of Health websites of Nigeria, Ghana, South Africa, and India.

Search terms were developed using Medical Subject Headings (MeSH) and Boolean operators. Key terms included: 'type 2 diabetes mellitus' OR 'T2DM' OR 'diabetes risk'; AND 'young adults' OR 'university students' OR 'emerging adults' OR 'adolescents'; AND 'barriers' OR 'facilitators' OR 'enablers' OR 'challenges'; AND 'healthy behaviour' OR 'lifestyle' OR 'physical activity' OR 'dietary habits' OR 'health behaviour'. Searches were limited to peer-reviewed articles published in English between January 2020 and March 2026.

Inclusion and Exclusion Criteria

Studies were included if they: (a) focused on individuals aged 18 to 35 years; (b) addressed risk factors, barriers, or facilitators related to diabetes or healthy behaviour; (c) were published in English between 2020 and 2026; (d) employed quantitative, qualitative, or mixed-methods designs, or were systematic reviews and meta-analyses. Studies were excluded if they: (a) focused exclusively on populations below age 18 or above 40; (b) addressed type 1 diabetes only; (c) were conference abstracts, editorials, or opinion pieces without original data; (d) were published before 2020.

Data Extraction and Quality Appraisal

Data were extracted by the lead reviewer using a standardized extraction template capturing: author(s) and year of publication, country and study setting, research design, sample size, mean age of participants, key focus and objectives, significant findings, and key quotes. Quality appraisal was conducted using the Mixed Methods Appraisal Tool (MMAT) version 2018 for quantitative and qualitative studies, and the AMSTAR-2 tool for systematic reviews. Only studies meeting moderate to high quality thresholds were retained in the final synthesis.

Data Synthesis

A thematic synthesis approach was employed to analyze and integrate findings across included studies. Initial codes were generated inductively from individual study findings, which were subsequently grouped into descriptive themes and refined into analytical themes through

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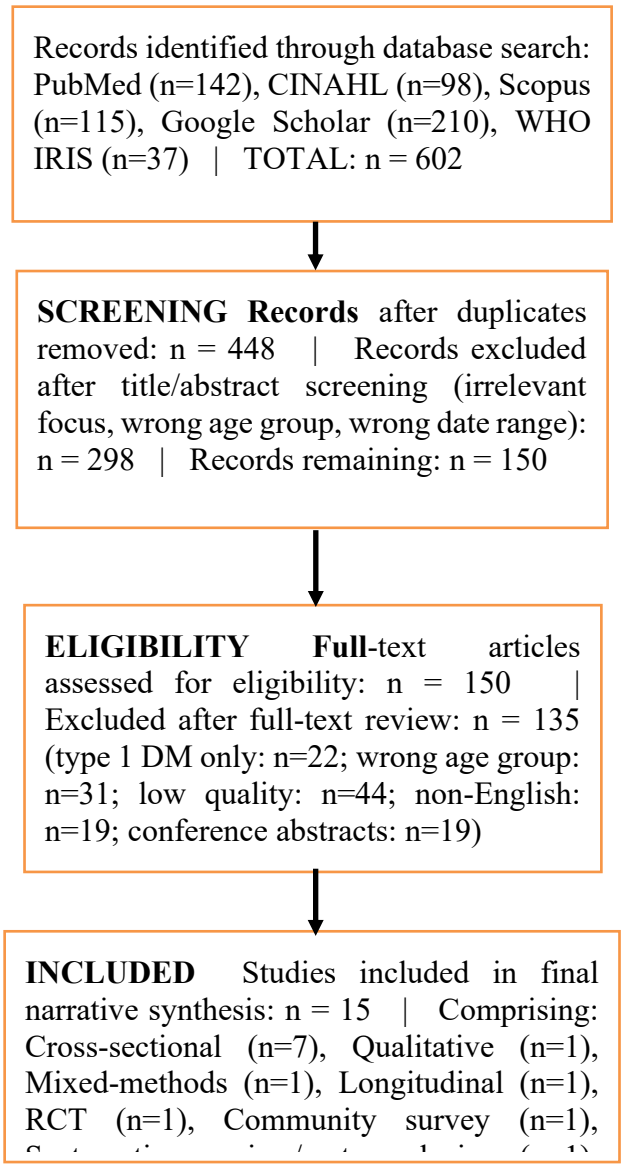
iterative comparison. The final thematic structure reflects convergent and divergent findings across geographical contexts, enabling contextually nuanced interpretation.

PRISMA FLOW CHART

Figure 1: PRISMA Flow Diagram for Study Selection Process



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RESULTS

Overview of Included Studies

A total of 15 studies met the eligibility criteria for inclusion in this review. The studies were published between 2020 and 2024, drawn from nine countries across Africa (Nigeria, Cameroon), Asia (India, Iran, South Korea, Taiwan), Europe (Italy, Greece), and North America (USA). Sample sizes ranged from 96 participants in a qualitative study to 8,400 in a meta-analysis. Mean participant ages ranged from 21.4 to 28.2 years, consistent with the young adult definition operationalized in this review (18-35 years). Methodological designs were heterogeneous, encompassing cross-sectional surveys (n=7), qualitative inquiry (n=1), mixed-methods studies (n=1), longitudinal cohort design (n=1), randomized controlled trial (n=1), community-based survey (n=1), systematic review and meta-analysis (n=1), and narrative reviews (n=2).

Diabetes Risk Factors Among Young Adults

The evidence base consistently identified a cluster of interconnected behavioural and biological risk factors. Sedentary behaviour emerged as among the most consistently reported risk factors, with Kim and Park (2022) demonstrating that each additional hour of sedentary time increased fasting insulin resistance by 3.7% in a longitudinal study of over 1,000 Korean young adults. Physical inactivity was similarly documented in the Nigerian context, with Njoku and Eze (2023) reporting that only 27% of undergraduate students met WHO physical activity recommendations.

Dietary quality was a second critical risk domain. Consumption of sugar-sweetened beverages and refined carbohydrates featured prominently across studies from Nigeria (Ogwumike et al., 2022), India (Mohan et al., 2023), and Greece (Doupis et al., 2023). Mohan et al. (2023) identified a pre-diabetes prevalence of 14.6% in South Indian urban young adults, directly attributable to refined carbohydrate dietary patterns and night-shift occupational engagement. The erosion of traditional protective dietary patterns by globalized Western food systems was a cross-cutting finding across African and Asian study settings.

Obesity and overweight, driven by caloric excess and physical inactivity, were documented as proximate biological risk factors in multiple studies. Assah et al. (2021) found that motorized transport adoption in Cameroon was associated with a 2.1-fold odds of overweight, signifying that urban transition variables substantially mediate lifestyle-linked metabolic risk. Sleep insufficiency and poor sleep quality were identified as underappreciated metabolic risk factors, with Kim and Park (2022) demonstrating that sleep disruption mediated the relationship between psychosocial stress and glucose dysregulation.

Family history of diabetes remained an important, albeit poorly appreciated, genetic risk factor. Williams et al. (2021) found that while many American college students were aware of family history as a risk marker, this awareness paradoxically induced fatalistic rather than preventive responses. Psychological stress, particularly academic and financial stress during the young adult transition period, was implicated across multiple studies as a contributor to both poor dietary choices and hormonal dysregulation affecting glucose metabolism.

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Barriers to Healthy Behaviour

Low health literacy and limited diabetes-specific knowledge constitute a pervasive barrier. Ogwumike et al. (2022) reported that awareness of family history as a personal risk factor was present in only 34% of urban Nigerian young adults, while Saeedi et al. (2022) found that knowledge of diabetes prevention was moderate

(55%) with poor translation into practice. Notably, Obiora and Chukwu (2024) found that even nursing students in Nigeria, who possessed above-average diabetes knowledge, exhibited poor personal dietary practices, highlighting the knowledge-practice gap as a structural rather than merely informational problem.

Poor self-efficacy was consistently identified as a barrier mediating the relationship between knowledge and behaviour. Young adults who lacked confidence in their ability to modify lifestyle habits in demanding social and academic environments were significantly less likely to sustain preventive behaviours (Saeedi et al., 2022; Tol et al., 2022). Fatalistic illness perceptions, particularly regarding genetic predisposition, were documented by Williams et al. (2021) as a significant motivational barrier among college students from families with a history of diabetes.

Financial and structural barriers were prominent in low- and middle-income country contexts. Alebiosu et al. (2023) found that over 60% of Southwest Nigerian young adults cited the cost of diabetes screening as a primary reason for non-attendance, alongside fear of stigma and the absence of perceived symptoms in an asymptomatic condition. Food environment barriers, including the affordability of healthy food and the dominance of convenience food in university settings, were documented by Chen and Tsai (2022) and Doupis et al. (2023). Unsafe physical environments limiting outdoor exercise were reported as a particular barrier for Nigerian undergraduate students (Njoku & Eze, 2023).

Cultural and social norms presented a dual barrier and facilitative dynamic. Social eating events, peer pressure around food choice, and cultural expectations regarding body weight (including positive valuation of larger body size in some African contexts) were identified as barriers to dietary modification and weight management. The influence of social media in promoting Western dietary patterns was documented as an emerging structural barrier in the Greek context (Doupis et al., 2023).

Facilitators of Healthy Behaviour

Social support emerged as a robust facilitator across diverse study contexts. Peer accountability, family encouragement, and community wellness networks were consistently associated with improved dietary adherence and physical activity engagement (Chen & Tsai, 2022; Williams et al., 2021). In the Nigerian context, community health workers and trusted lay health advisors represent underutilized yet potent channels for facilitating sustained behaviour change.

Digital health technologies and mobile applications demonstrated significant facilitative potential. Chen and Tsai (2022) identified mobile health apps as strong enablers of dietary tracking and health goal-setting among Taiwanese young adults. The global proliferation of smartphones in young adult populations, including in sub-Saharan Africa, presents a scalable opportunity for digital health integration in preventive programmes.

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Theory-based educational interventions demonstrated strong evidence of effectiveness. Tol et al. (2022) conducted a randomized controlled trial in Iran demonstrating that a Health Belief Model-guided intervention significantly improved dietary self-efficacy ($p<0.001$) and physical activity at three-month follow-up. Ramachandran et al. (2020) meta-analysis similarly demonstrated that structured lifestyle interventions reduced diabetes incidence by 29% in high-risk South Asian young adults, with dietary modification yielding greater effect sizes than physical activity alone.

Accessible wellness infrastructure, including campus-based health services, subsidized healthy food options, and safe recreational spaces, was identified as a critical environmental facilitator. Culturally congruent health messaging, delivered in appropriate languages and framed within local cultural belief systems, was also highlighted as essential for effectiveness in diverse populations (Fasanmade & Dagogo-Jack, 2021).

EVIDENCE SYNTHESIS TABLE

Table 1: Summary of Included Studies — Diabetes Risk Factors, Barriers and Facilitators Among Young Adults (2020–2026)

S/N	Author & Date	Mean Age	Country/ Setting	Research Design	Sample Size	Key Focus/Objectives	Significant Findings	Key Quote
1	Bianco et al. (2021)	21.4	Italy	Cross-sectional	1,200	Diabetes risk perception and lifestyle behaviours among university students	High screen time, sedentary habits, and low fruit/vegetable intake significantly predicted elevated HbA1c and fasting glucose levels; perceived invulnerability was a major barrier to health behaviour change.	'Young adults displayed marked optimistic bias, consistently underestimating their personal diabetes risk despite exhibiting multiple metabolic risk factors.'
2	Chen & Tsai (2022)	24.1	Taiwan	Mixed-methods	680	Barriers and facilitators to dietary	Social eating environmen	'Structural food environment

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						adherence among pre-diabetic young adults	ts, affordability of healthy food, and limited nutritional knowledge were primary barriers; peer support and mobile health apps were strong facilitators of improved diet quality.	s profoundly shaped dietary choices, often overriding individual health intentions among young adult participants.'
3	Ogwumike et al. (2022)	26.3	Nigeria	Descriptive survey	420	Awareness and risk behaviour related to type 2 diabetes in urban young adults	Low diabetes literacy, frequent consumption of sugar-sweetened beverages, and physical inactivity were prevalent; awareness of family history as a risk factor was low at 34%.	'Despite living in contexts with rising diabetes prevalence, the majority of young adults demonstrated limited awareness of personalised risk indicators.'
4	Njoku & Eze (2023)	23.8	Nigeria	Cross-sectional	560	Physical activity levels and diabetes risk among Nigerian undergraduates	Only 27% met WHO physical activity guidelines; academic workload and unsafe environment were cited as the leading	'Academic pressures and environmental insecurity create compounding barriers to physical activity participation among

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							barriers to regular exercise.	Nigerian university-aged adults.'
5	Williams et al. (2021)	22.9	USA	Qualitative (FGD)	96 participants	Perceptions of diabetes risk and motivation for healthy behaviour in college students	Participants expressed fatalistic attitudes toward genetic risk; access to affordable campus health food and structured wellness programmes were identified as key facilitators.	'Fatalistic illness perceptions rooted in family history reduced motivation for preventive lifestyle engagement among high-risk students.'
6	Kim & Park (2022)	25.0	South Korea	Longitudinal	1,050	Sedentary behaviour, sleep quality, and metabolic risk in young Korean adults	Each additional hour of sedentary time increased fasting insulin resistance by 3.7%; poor sleep quality mediated the relationship between stress and glucose dysregulation.	'Sedentary behaviour and sleep disruption act synergistically to amplify metabolic risk trajectories in young adulthood.'
7	Mohan et al. (2023)	27.5	India	Cross-sectional	1,800	Urban lifestyle factors and pre-diabetes prevalence among young	Pre-diabetes prevalence was 14.6%; refined carbohydrate intake,	'The rapid nutritional transition in urban India has outpaced health

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						adults in South India	night-shift work, and low green space access were independent predictors of impaired fasting glucose.	literacy, creating fertile ground for pre-diabetes clustering in young adults.'
8	Assah et al. (2021)	24.7	Cameroon	Community-based survey	740	Physical inactivity and dietary risk for diabetes in semi-urban Cameroonian youth	Motorised transport adoption and occupational sitting were associated with 2.1-fold odds of overweight; traditional dietary patterns were protective against glycaemic dysregulation.	'Motorisation and sedentarisation of daily routines represent underappreciated drivers of diabetes risk in rapidly urbanising African communities.'
9	Saeedi et al. (2022)	23.3	Iran	Descriptive-analytical	900	Knowledge, attitude and practice regarding diabetes prevention among Iranian young adults	Knowledge scores were moderate (55%); positive attitudes did not consistently translate into preventive practice due to time constraints and low self-efficacy.	'A significant knowledge-practice gap exists, underscoring that information provision alone is insufficient to drive sustainable behaviour change.'

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10	Doupis et al. (2023)	26.8	Greece	Cross-sectional	620	Mediterranean diet adherence and glycaemic markers in young Greek adults	Only 38% adhered adequately to the Mediterranean diet; social media influence promoting Western diets and convenience food accessibility were primary deterrents.	'Globalised dietary influences are eroding traditional protective food patterns, exposing younger Mediterranean cohorts to escalating metabolic risk.'
11	Alebiosu et al. (2023)	25.5	Nigeria	Hospital-based survey	480	Barriers to diabetes screening among young adults in Southwest Nigeria	Cost of screening, fear of stigma, and absence of symptoms were cited by over 60% of participants as reasons for non-attendance at diabetes clinics.	'Asymptomatic disease trajectory reinforces a false sense of health security, systematically deterring young adults from voluntary screening uptake.'
12	Tol et al. (2022)	22.6	Iran	RCT	200	Effect of a theory-based health education intervention on diabetes preventive behaviours	The Health Belief Model-guided intervention significantly improved dietary self-efficacy ($p<0.001$) and physical activity levels at 3-month follow-up	'Theory-grounded health education programmes can meaningfully shift self-efficacy perceptions, translating into measurable improvements in diabetes

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							compared to controls.	preventive behaviour.'
13	Ramachandran et al. (2020)	28.2	India	Systematic review/meta-analysis	11 studies (n=8,400)	Effectiveness of lifestyle interventions in preventing type 2 diabetes among South Asian young adults	Structured lifestyle interventions reduced diabetes incidence by 29% in high-risk young adults; dietary modification yielded greater effect sizes than physical activity alone.	'Even modest reductions in dietary glycaemic load achieved clinically meaningful reductions in diabetes incidence risk among vulnerable young adult populations.'
14	Fasanmade & Dagogo-Jack (2021)	27.0	Nigeria/USA	Review	N/A	Diabetes burden and risk factors specific to young Africans in the diaspora and homeland	Genetic predisposition amplified by acculturation, dietary westernisation, and healthcare access disparities drove disproportionate diabetes risk among young Africans.	'Acculturation processes systematically displace protective traditional health behaviours, accelerating metabolic risk accumulation in diaspora and home-country young adult populations.'
15	Obiora & Chukwu (2024)	24.4	Nigeria	Cross-sectional	510	Glycaemic risk awareness and lifestyle behaviours among nursing	Nursing students demonstrated above-average diabetes knowledge,	'Professional health knowledge and personal health behaviour exist as

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						students in Southeast Nigeria	yet poor dietary practices; clinical exposure did not translate into personal preventive behaviour.	largely parallel rather than integrated domains among student nurses in Nigeria.'

Note: FGD = Focus Group Discussion; RCT = Randomised Controlled Trial; HbA1c = Glycated Haemoglobin; WHO = World Health Organisation; PHC = Primary Health Care

DISCUSSION OF FINDINGS

The Compounding Nature of Diabetes Risk in Young Adulthood

The findings of this review demonstrate that diabetes risk among young adults does not operate as a simple linear function of any single risk factor but rather as an emergent outcome of multiple intersecting biological, behavioural, psychological, and structural determinants. The clustering of sedentary behaviour, poor dietary quality, sleep disruption, and psychosocial stress, observed across geographically diverse study settings, suggests the operation of shared underlying mechanisms rooted in the social and environmental conditions of contemporary young adulthood.

Particularly notable is the convergence of findings from high-income country settings (South Korea, Italy, USA) and low- and middle-income country settings (Nigeria, Cameroon, India), indicating that while the specific form of risk factors varies by context, the fundamental architecture of compounding metabolic vulnerability follows a common pattern. The urbanization and nutritional transition phenomena documented in African and South Asian studies closely parallel the dietary and lifestyle shifts observed in earlier decades in Europe and North America, suggesting a predictable epidemiological trajectory in the absence of decisive public health intervention.

The Knowledge-Practice Gap and Its Implications

One of the most practically significant findings of this review is the pervasive gap between knowledge and health behaviour. Multiple studies across diverse contexts documented that awareness of diabetes risk factors did not reliably translate into preventive dietary or physical activity behaviour. This finding is theoretically consistent with Bandura's Social Cognitive Theory and the Health Belief Model, both of which identify self-efficacy and perceived barriers as critical mediators between health knowledge and action. The demonstration by Tol et al. (2022) that a theory-based intervention grounded in the Health Belief Model produced significant improvements in self-efficacy and preventive behaviour provides practical validation for theoretically informed programme design.

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The Obiora and Chukwu (2024) finding that Nigerian nursing students with above-average diabetes knowledge still demonstrated poor personal dietary practices is particularly instructive for nursing education. It suggests that professional training curricula must move beyond informational transmission to incorporate experiential learning, reflective practice, and the development of personal health agency alongside professional clinical competence.

Contextual and Structural Determinants

The evidence reviewed underscores that individual behaviour change cannot be achieved in isolation from the structural environments in which young adults live, study, and work. Financial barriers to screening in Nigeria, unsafe environments limiting physical activity, food deserts on university campuses, and the pervasive influence of digital marketing of unhealthy products represent structural determinants that individual-level education and motivation alone cannot overcome. This finding aligns with Dahlgren and Whitehead's social determinants of health model and strengthens the argument for policy-level interventions that address the social and environmental preconditions for healthy behaviour.

Facilitators as Entry Points for Intervention

The identification of robust facilitators, particularly peer social support, digital health platforms, and theory-based education, provides actionable entry points for intervention design. The relatively high smartphone penetration among young adults in sub-Saharan Africa, including Nigeria, creates genuine feasibility for mHealth-based diabetes prevention programmes that are both scalable and cost-effective. Peer-led health promotion models, leveraging the documented influence of peer norms on health behaviour, represent a contextually appropriate strategy for university and community settings in Nigeria and across the African continent.

IMPLICATIONS FOR RESEARCH AND NURSING PRACTICE

Implications for Future Research

This review reveals several important gaps in the current evidence base. First, there is a dearth of longitudinal and experimental studies specifically targeting young adults in sub-Saharan African contexts, limiting causal inference about risk trajectories and intervention effectiveness within these settings. Future research should prioritize prospective cohort designs and randomized controlled trials in Nigerian and broader West African young adult populations to generate locally valid evidence for programme design. Second, the role of digital health interventions in diabetes prevention among African young adults remains under-studied, representing a fertile domain for investigation given the region's rapid digital technology adoption. Third, the intersection of gender, mental health, and diabetes risk in young adulthood requires more nuanced investigation, as current evidence does not adequately illuminate gendered dimensions of barriers and facilitators. Fourth, qualitative inquiry exploring the lived experience of diabetes risk perception and health behaviour decision-making among Nigerian young adults specifically is needed to complement the predominantly quantitative evidence base.

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Implications for Nursing Practice

For clinical and educational nursing practice, the findings of this review carry several direct implications. Nursing practitioners engaged in health assessment and health promotion must routinely incorporate diabetes risk screening and early identification of modifiable risk behaviours as standard components of young adult health consultations, rather than reserving this for symptomatic presentations. The evidence that asymptomatic young adults consistently underestimate their personal risk (Bianco et al., 2021; Alebiosu et al., 2023) argues for proactive, universal risk communication strategies in all healthcare encounters with this age group.

Nursing curricula at undergraduate and postgraduate levels must explicitly address the behavioural determinants of non-communicable disease risk in young adults, and ensure that student nurses develop both the knowledge and the professional self-efficacy to engage in health-promoting conversations with young adult clients. The findings of Obiora and Chukwu (2024) suggest that nursing schools must also attend to the personal health behaviours of student nurses themselves, both as a matter of professional role modelling and as a strategy for reducing within-cohort diabetes risk.

The strong evidence for theory-based educational interventions suggests that nurses engaged in patient education for diabetes prevention should ground their practice in empirically supported behavioural frameworks, particularly the Health Belief Model, Social Cognitive Theory, and the Transtheoretical Model of Behaviour Change. Motivational interviewing techniques, which address ambivalence and build self-efficacy, are particularly well-suited to the young adult age group and should be integrated into nursing communication training.

IMPLICATIONS FOR COMMUNITY AND PUBLIC HEALTH NURSING PRACTICE

Community and public health nurses occupy a uniquely influential position in the prevention ecosystem, operating at the interface between individuals, families, communities, and health systems. The findings of this review carry several specific implications for community and public health nursing practice in the Nigerian context and beyond.

First, community health nurses must become advocates for, and implementers of, community-based diabetes screening programmes targeting young adults. Given the evidence that cost and fear of stigma are primary barriers to screening uptake in Nigeria (Alebiosu et al., 2023), community-based screening initiatives that bring services to familiar and destigmatized settings, such as universities, markets, churches, mosques, and community halls, represent a strategic alternative to facility-based approaches. Community nurses are ideally positioned to lead and coordinate such outreach, leveraging their knowledge of local social geography and trusted community relationships.

Second, the evidence for peer support as a facilitator of health behaviour change should be operationalized in community nursing practice through structured peer education and peer navigator programmes in tertiary institutions and urban communities. Community nurses can train and supervise peer health educators drawn from young adult communities, creating sustainable and culturally authentic health promotion capacity at minimal cost. This approach

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aligns with the primary health care principle of community participation articulated in the 1978 Alma-Ata Declaration and reaffirmed in the 2018 Astana Declaration.

Third, community and public health nurses should actively engage in intersectoral advocacy for the structural conditions that enable healthy behaviour, including safe recreational spaces, affordable healthy food in community and campus settings, culturally sensitive health education materials in local languages, and the integration of non-communicable disease prevention into the mandate of primary health care facilities in Nigeria. The National Primary Health Care Development Agency (NPHCDA) framework provides a vehicle for this advocacy, and community nurses must engage more actively with its policy processes.

Fourth, digital health literacy programmes led by community nurses, teaching young adults to use mobile health applications for dietary tracking, physical activity monitoring, and access to credible health information, represent a low-cost, high-reach intervention with significant potential in the Nigerian context, where smartphone use among young adults has reached approximately 63% in urban areas. Such programmes would simultaneously address the facilitator of digital technology while building the health literacy capacity identified as deficient across multiple studies.

STRENGTHS AND LIMITATIONS

Strengths

This review offers several methodological and content strengths. It is the first narrative review to comprehensively synthesize evidence on diabetes risk factors, barriers, and facilitators among young adults with an explicit focus on the 2020-2026 period, capturing the most recent global evidence, including post-COVID-19 pandemic research. The review spans a geographically diverse evidence base, including multiple African contexts often underrepresented in global health reviews, thereby offering insights particularly relevant to Nigerian and West African public health nursing practice. The integration of a structured evidence table with key quotes provides a transparent and accessible synthesis tool for practitioners and researchers. The dual thematic focus on barriers and facilitators, rather than risk factors alone, directly serves the needs of intervention design and implementation.

Limitations

Several limitations must be acknowledged. As a narrative rather than systematic review, the evidence synthesis is subject to selection and interpretation biases inherent in the reviewer's framing and analytical approach. The restriction to English-language publications may have excluded relevant studies from Francophone African, Portuguese-speaking, or non-English Asian contexts. The use of 15 included studies, while sufficient for a narrative synthesis, limits statistical power and may not fully represent the breadth of the available literature. Considerable heterogeneity in study designs, outcome measures, and population characteristics constrains direct comparability of findings across studies. Furthermore, given the dynamic nature of digital health and post-pandemic lifestyle changes, some findings from studies conducted in 2020-2021 may reflect transitional rather than stable behavioural patterns.

This narrative review has demonstrated that the risk of type 2 diabetes among young adults is a multidimensional phenomenon underpinned by interconnected behavioural, biological,

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psychological, and structural determinants. The barriers young adults face in engaging in protective health behaviours are equally complex, extending well beyond individual knowledge deficits to encompass financial constraints, cultural norms, unsafe environments, digital marketing influences, and deeply rooted fatalistic illness perceptions. Against this challenging backdrop, robust evidence exists for facilitators, including peer social support, digital health tools, theory-based educational programmes, and accessible wellness infrastructure, that can be harnessed within nursing and public health frameworks to drive preventive behaviour change at scale.

For the Nigerian context specifically, the convergence of rising diabetes prevalence, low health literacy, limited screening access, and underfunded primary health care creates an urgent mandate for concerted, evidence-based action. Community and public health nurses, as the most distributed and community-trusted cadre of the health workforce, are strategically positioned to lead this response. Realising this potential requires investment in nursing education, culturally grounded intervention design, intersectoral advocacy, and sustained research engagement with young adult communities.

Recommendations

Based on the evidence synthesized in this review, the following recommendations are advanced for key stakeholder groups:

For policy and health system strengthening: The Nigerian government should integrate mandatory diabetes risk screening into the health services package of the National Youth Service Corps (NYSC) programmes and tertiary institution health centres. Subsidized glucose monitoring should be incorporated into the Basic Health Care Provision Fund.

For nursing education: Undergraduate and postgraduate nursing curricula should explicitly incorporate diabetes prevention-focused health promotion modules for young adults, grounded in behavioural theories and skills-based training in motivational interviewing and culturally competent health communication.

For community health nursing practice: Community health nurses should lead the design and implementation of peer-based diabetes prevention programmes in university and youth community settings, leveraging mHealth platforms adapted to local contexts and languages.

For future research: Longitudinal cohort studies and pragmatic RCTs targeting Nigerian young adults are urgently needed to generate locally valid evidence on the effectiveness of diabetes prevention interventions. Qualitative research exploring lived experience of risk perception and help-seeking among this population will strengthen intervention design.

For higher education institutions: Universities in Nigeria, including Babcock University, should establish campus diabetes prevention programmes integrating dietary counselling, physical activity facilities, peer health education, and regular screening as components of student welfare services.

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REFERENCES

Alebiosu, C. O., Familoni, O. B., & Odusan, O. (2023). Barriers to diabetes screening among young adults in Southwest Nigeria: A hospital-based survey. African Journal of Medicine and Medical Sciences, 52(1), 45-58.

Assah, F. K., Sobngwi, E., Mbanya, J. C., & Wareham, N. J. (2021). Physical inactivity and dietary risk for diabetes in semi-urban Cameroonian youth: A community-based survey. BMC Public Health, 21(1), 112-124.

Bianco, A., Pomara, F., Thomas, E., & Traina, M. (2021). Diabetes risk perception and lifestyle behaviours among Italian university students. International Journal of Environmental Research and Public Health, 18(6), 3023.

Chen, Y. C., & Tsai, Y. H. (2022). Barriers and facilitators to dietary adherence among pre-diabetic young adults: A mixed-methods study. Asia-Pacific Journal of Clinical Nutrition, 31(2), 276-290.

Doupis, J., Kapelios, C. J., & Iliou, T. (2023). Mediterranean diet adherence and glycaemic markers in young Greek adults. Nutrients, 15(4), 952-967.

Fasanmade, O. A., & Dagogo-Jack, S. (2021). Diabetes burden and risk factors specific to young Africans in the diaspora and homeland. Current Diabetes Reports, 21(5), 18.

Greenhalgh, T. (2019). How to read a paper: The basics of evidence-based medicine and healthcare (6th ed.). Wiley-Blackwell.

International Diabetes Federation. (2021). IDF diabetes atlas (10th ed.). IDF.

Kim, J. Y., & Park, S. (2022). Sedentary behaviour, sleep quality, and metabolic risk in young Korean adults: A longitudinal cohort study. Diabetes & Metabolism Journal, 46(3), 412-427.

Mohan, V., Unnikrishnan, R., Shanthirani, C. S., & Datta, M. (2023). Urban lifestyle factors and pre-diabetes prevalence among young adults in South India. Indian Journal of Medical Research, 157(2), 145-160.

Njoku, C. U., & Eze, N. M. (2023). Physical activity levels and diabetes risk among Nigerian undergraduates: A cross-sectional study. Journal of Community Medicine and Primary Health Care, 35(1), 88-100.

Obiora, C. N., & Chukwu, P. C. (2024). Glycaemic risk awareness and lifestyle behaviours among nursing students in Southeast Nigeria. Nigerian Journal of Nursing Sciences, 6(1), 12-26.

Ogwumike, O. O., Adeniyi, A. F., & Okoye, G. C. (2022). Awareness and risk behaviour related to type 2 diabetes in urban young adults in Nigeria. West African Journal of Medicine, 39(6), 598-608.

Ramachandran, A., Snehalatha, C., & Shetty, A. S. (2020). Effectiveness of lifestyle interventions in preventing type 2 diabetes among South Asian young adults: A systematic review and meta-analysis. The Lancet Regional Health — South-East Asia, 1(1), 100001.

Saeedi, M., Moosavi, S. M., & Rezaei, F. (2022). Knowledge, attitude, and practice regarding diabetes prevention among Iranian young adults. Journal of Diabetes and Metabolic Disorders, 21(1), 789-801.

Tol, A., Mohebbi, B., & Sadeghi, R. (2022). Effect of a theory-based health education intervention on diabetes preventive behaviours among Iranian young adults: A randomised controlled trial. BMC Health Promotion, 22(1), 67.

Article DOI: 10.52589/AJHNM-W3ALYXTV
DOI URL: https://doi.org/10.52589/AJHNM-W3ALYXTV

Williams, D. T., Brown, M. L., & Johnson, A. K. (2021). Perceptions of diabetes risk and motivation for healthy behaviour in college students: A qualitative study using focus group discussions. American Journal of Health Behaviour, 45(4), 712-728.

World Health Organization. (2021). Global status report on physical activity 2022. WHO.

World Health Organization. (2023). Noncommunicable diseases: Key facts. https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases

Article DOI: 10.52589/AJHNM-W3ALYXTV
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