The Role Of General Practitioners In Enhancing Adherence To Radiological Screening In Diabetes: Integrating Psychological And Social Support

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Abstract

Background: Diabetes mellitus represents a major global public health challenge and is associated with a substantial burden of chronic microvascular and macrovascular complications. Regular screening for diabetes-related complications is essential for early detection, timely intervention, and prevention of irreversible damage. Contemporary diabetes screening protocols extend beyond laboratory and clinical assessments to include **radiological and imaging-based investigations**, such as retinal imaging for diabetic retinopathy, Doppler ultrasound for peripheral arterial disease, and renal ultrasound for diabetic nephropathy, as recommended by international guidelines (World Health Organization, 2023; American Diabetes Association, 2024). Despite their proven clinical value, adherence to recommended screening schedules—including radiological screening—remains suboptimal. Increasing evidence indicates that psychological and social determinants significantly influence patients' engagement with preventive and diagnostic imaging services. Within primary healthcare systems, general practitioners (GPs) are uniquely positioned to address these determinants through holistic, patient-centered care.

Objective: This narrative review aims to examine the contribution of general practitioners to enhancing adherence to regular diabetes screening, **with particular emphasis on radiological and imaging-based screening**, through psychological and social support, focusing on evidence relevant to the Saudi Arabian healthcare context.

Methods: A narrative review of the literature was conducted using international clinical guidelines, systematic reviews, and empirical studies addressing diabetes screening adherence, psychosocial determinants of health, and GP-led interventions in primary care. Particular attention was given to studies examining adherence to **radiological screening modalities** for diabetes complications. Both global and Saudi-based peer-reviewed studies were included to ensure contextual relevance and applicability to the Saudi healthcare system.

Results: The reviewed evidence indicates that psychological factors—such as diabetes-related distress, depression, anxiety, fear of abnormal imaging findings, and maladaptive health beliefs—constitute major barriers to adherence to regular screening, including

radiological investigations. Social determinants, including family support, health literacy, socioeconomic constraints, cultural beliefs, and healthcare system factors, further influence patients' acceptance of and engagement with imaging-based screening. General practitioners play a pivotal role in mitigating these barriers by providing psychosocial support, offering reassurance regarding radiological procedures, fostering patient trust, addressing emotional concerns, engaging family members, and coordinating referrals for diagnostic imaging. In Saudi Arabia, the high prevalence of diabetes, cultural influences on healthcare-seeking behavior, and the central role of primary care underscore the importance of GP-led, psychosocially informed approaches to improving adherence to radiological screening. Nevertheless, challenges related to time constraints, training in psychosocial care, and integration between primary care and radiology services persist.
Conclusion: Adherence to regular diabetes screening, including **radiological and imaging-based assessments**, is strongly influenced by psychological and social factors that extend beyond biomedical care alone. General practitioners are central to addressing these determinants within primary care settings. Strengthening GP capacity to deliver psychosocial support, alongside improved integration of radiological services and mental health and social care within primary healthcare systems, may substantially enhance screening adherence and reduce the burden of diabetes complications—particularly in high-prevalence settings such as Saudi Arabia.
Keywords: Diabetes mellitus; radiological screening; imaging-based screening; screening adherence; general practitioners; psychosocial support; primary care; Saudi Arabia.

INTRODUCTION

Diabetes mellitus is one of the most prevalent chronic diseases worldwide and a leading contributor to morbidity, mortality, and healthcare expenditure. According to recent global estimates, the number of adults living with diabetes continues to rise steadily, driven by population aging, urbanization, physical inactivity, and increasing rates of obesity. The long-term burden of diabetes is largely attributed to its chronic complications, including cardiovascular disease, diabetic retinopathy, nephropathy, neuropathy, and lower-extremity amputations, which significantly impair quality of life and increase the risk of premature death (World Health Organization, 2023; American Diabetes Association, 2024).

Regular screening for diabetes-related complications is a cornerstone of effective diabetes management. Evidence-based guidelines consistently emphasize the importance of periodic screening to enable early detection, timely intervention, and prevention of irreversible damage. In contemporary diabetes care, recommended screening protocols extend beyond laboratory testing to include **radiological and imaging-based assessments**, such as retinal imaging for diabetic retinopathy, Doppler ultrasound for peripheral arterial disease, and renal ultrasound for the evaluation of diabetic nephropathy. Adherence to these screening modalities has been shown to reduce complication rates, improve functional outcomes, and lower long-term healthcare costs (ADA, 2024; Tricco et al., 2021).

Despite these well-established benefits, adherence to regular diabetes screening—including **radiological screening procedures**—remains suboptimal across many healthcare systems. Importantly, growing evidence suggests that non-adherence cannot be explained solely by healthcare access or service availability. Psychological and social factors play a critical role in shaping patients' engagement with preventive and diagnostic services. Diabetes-related distress, depression, anxiety, fear of unfavorable imaging results, low health literacy, and limited social support have all been identified as key determinants of delayed or missed screening appointments (Fisher et al., 2019; Gonzalez et al., 2018). These

factors may be particularly relevant for imaging-based procedures, which are often associated with heightened patient anxiety and misconceptions.

Within this context, **general practitioners (GPs)** are uniquely positioned to influence adherence to regular diabetes screening, including radiological investigations. As providers of first-contact and continuous care, GPs maintain long-term relationships with patients and act as coordinators of chronic disease management. This role enables them to address not only biomedical indicators but also emotional concerns, social barriers, and patient beliefs that influence acceptance of and adherence to imaging-based screening. International guidelines increasingly recognize the importance of integrating psychological and social support into routine diabetes care within primary healthcare settings to enhance engagement with recommended diagnostic procedures (ADA, 2024).

Psychosocially informed primary care—where GPs actively assess emotional well-being, provide reassurance regarding diagnostic imaging, address psychosocial barriers, involve family members, and promote shared decision-making—has been associated with improved self-management behaviors and greater uptake of preventive services, including **radiological screening for diabetes complications** (Peyrot et al., 2019; Stuckey et al., 2015). Nevertheless, the extent to which such approaches are systematically implemented in everyday primary care practice varies considerably, and their impact on adherence to imaging-based screening warrants further synthesis and contextual evaluation.

The Saudi Arabian Context

Saudi Arabia is among the countries with the highest prevalence of diabetes globally, representing a major public health challenge for the national healthcare system. Rapid socioeconomic development, lifestyle transitions, and high rates of obesity have contributed to the growing burden of diabetes within the Kingdom. Although substantial investments have been made to strengthen primary healthcare services and expand national screening initiatives—including access to diagnostic imaging—evidence indicates that adherence to regular screening for diabetes complications, particularly imaging-based assessments, remains inconsistent (Alramadan et al., 2018; Alqurashi et al., 2021).

Saudi-based studies have identified multiple barriers to screening adherence, such as limited patient awareness, fear of abnormal findings, psychological distress, cultural beliefs, and reliance on symptom-driven healthcare utilization. These barriers are especially relevant to radiological screening, where apprehension toward imaging procedures may further reduce uptake. In line with Saudi Vision 2030, which emphasizes preventive care, patient-centered services, and the strengthening of primary care, the strategic role of GPs in enhancing adherence to radiological screening through holistic, psychosocially informed care has become increasingly important.

Aim of the Review

This narrative review aims to synthesize international and Saudi literature on the contribution of general practitioners to enhancing adherence to regular diabetes screening, **with particular emphasis on radiological and imaging-based assessments**, through psychological and social support. By examining psychosocial determinants of screening behaviors and GP-led interventions within primary care, this review seeks to provide evidence-informed insights to support clinical practice, healthcare policy, and future research, particularly within the Saudi Arabian context.

1. Psychological Determinants of Adherence to Regular Diabetes Screening

Adherence to regular screening for diabetes-related complications is profoundly influenced by psychological factors that affect patients' motivation, perceptions, and health-related decision-making. A growing body of evidence indicates that emotional and cognitive responses to living with diabetes play a central role in determining engagement with preventive services, including routine screening (Fisher et al., 2019).

One of the most widely studied psychological barriers is **diabetes-related distress**, which refers to the emotional burden associated with continuous disease management, fear of complications, and perceived lack of control over health outcomes. High levels of diabetes distress have been consistently associated with reduced adherence to self-care behaviors, missed medical appointments, and avoidance of screening procedures (Holt et al., 2021). Patients experiencing distress may perceive screening as emotionally threatening, particularly when it is associated with the possibility of detecting irreversible complications. Depression and anxiety are also strongly linked to poor adherence to preventive care. Meta-analytical evidence demonstrates that individuals with diabetes who experience depressive symptoms are significantly less likely to engage in recommended screening and follow-up activities (Gonzalez et al., 2018). Depression may impair executive functioning, reduce motivation, and diminish perceived benefits of preventive care, while anxiety—especially fear of adverse results—may lead to intentional screening avoidance. Importantly, these psychological conditions often remain underdiagnosed in primary care settings, further exacerbating their negative impact on screening adherence.

Cognitive factors, including **health beliefs, risk perception, and self-efficacy**, additionally shape screening behaviors. Patients who underestimate the severity of diabetes or believe that screening is unnecessary in the absence of symptoms are less likely to adhere to regular screening schedules (Peyrot et al., 2019). Conversely, higher levels of self-efficacy and perceived control over health outcomes have been associated with improved engagement in preventive services. These findings highlight the importance of addressing maladaptive beliefs and enhancing patients' confidence in their ability to manage diabetes effectively.

In the Saudi Arabian context, psychological determinants of diabetes care are increasingly recognized as significant yet insufficiently addressed. Studies conducted among patients with diabetes in Saudi Arabia have reported high prevalence rates of diabetes distress and depressive symptoms, which are associated with poor glycemic control and reduced healthcare engagement (Alramadan et al., 2018; Al-Shahrani et al., 2020). Cultural factors, including reluctance to discuss emotional difficulties and stigma surrounding mental health, may further limit patients' willingness to seek psychological support, thereby negatively influencing adherence to screening recommendations.

Taken together, the evidence underscores that psychological factors constitute a critical barrier to regular diabetes screening. Addressing emotional distress, mental health symptoms, and maladaptive health beliefs within primary care is therefore essential for improving adherence. These findings provide a strong rationale for integrating psychological assessment and support into routine GP-led diabetes care, particularly in high-burden settings such as Saudi Arabia.

2. Social Support and Social Determinants Influencing Adherence to Diabetes Screening

Adherence to regular diabetes screening is not determined solely by individual motivation or psychological well-being, but is also profoundly shaped by **social support systems and broader social determinants of health**. Social determinants—including socioeconomic status, education, employment conditions, family structure, and access to healthcare resources—have been consistently identified as key drivers of preventive health behaviors in chronic disease management (World Health Organization, 2010).

Social support, encompassing emotional, informational, and practical assistance from family members, peers, and healthcare providers, plays a particularly important role in facilitating adherence to diabetes screening. Multiple studies have demonstrated that patients who perceive strong family or social support are more likely to attend routine screening appointments, adhere to follow-up recommendations, and engage in long-term

preventive care (Baig et al., 2015; Mayberry & Osborn, 2012). Family members may contribute by encouraging attendance, assisting with appointment scheduling, providing transportation, or reinforcing the perceived importance of screening.

Conversely, limited social support has been associated with missed appointments and reduced engagement with preventive services. Patients facing competing social responsibilities, caregiving demands, or work-related constraints may prioritize immediate obligations over long-term preventive care. Financial barriers and transportation challenges further exacerbate these difficulties, particularly in settings where screening services require referrals or visits to multiple facilities (Tricco et al., 2021).

Healthcare system–related social factors are equally influential. Continuity of care, quality of patient–provider communication, and trust in healthcare professionals significantly affect screening adherence. Patients who experience respectful communication and feel that their social context is understood by their healthcare providers are more likely to comply with screening recommendations (Starfield et al., 2005). In contrast, fragmented care pathways and limited consultation time may reduce opportunities to identify and address social barriers to screening.

Social Determinants in the Saudi Arabian Context

In Saudi Arabia, social and cultural factors exert a distinct influence on diabetes care and screening behaviors. Strong family structures often play a dual role, acting as facilitators of care for some patients while contributing to delayed screening for others when illness is normalized or minimized within the family context. Several Saudi studies have reported that patients may postpone screening in the absence of symptoms, relying on family reassurance rather than preventive medical advice (Alqurashi et al., 2021; Alramadan et al., 2018).

Health literacy remains another critical determinant. Despite improvements in healthcare infrastructure, variations in educational attainment and health awareness persist across regions in Saudi Arabia. Limited understanding of the purpose of screening—particularly the concept of early detection in asymptomatic individuals—has been identified as a barrier to regular attendance at screening programs (Al-Khaldi et al., 2020). Additionally, employment demands and appointment scheduling challenges may disproportionately affect working-age adults, further limiting screening uptake.

Importantly, the ongoing healthcare transformation under **Saudi Vision 2030** emphasizes addressing social determinants of health, enhancing patient engagement, and strengthening primary care as the foundation of preventive services. Within this framework, integrating social support considerations into routine diabetes care is increasingly recognized as essential for improving adherence to screening and long-term outcomes.

Overall, the evidence highlights that social support and social determinants are integral components of diabetes screening adherence. Addressing these factors requires coordinated efforts within primary care to identify social barriers, engage family members appropriately, and tailor screening recommendations to patients' social circumstances. These findings underscore the importance of a holistic, socially informed approach to diabetes screening, particularly in high-prevalence settings such as Saudi Arabia.

3. The Role of General Practitioners in Enhancing Adherence to Diabetes Screening Through Psychological and Social Support

General practitioners (GPs) play a central and multifaceted role in improving adherence to regular diabetes screening by addressing both psychological and social determinants of health within primary care settings. As the first point of contact and providers of continuous, longitudinal care, GPs are uniquely positioned to influence patients' preventive health behaviors through sustained relationships, trust-building, and holistic care delivery (Starfield et al., 2005).

Psychological Support in GP-Led Diabetes Care

International guidelines increasingly emphasize the responsibility of primary care physicians to incorporate **psychological assessment and support** into routine diabetes management. GPs can identify early signs of diabetes-related distress, anxiety, and depressive symptoms through clinical interaction and, where feasible, brief screening tools. Evidence suggests that even low-intensity psychological interventions—such as empathetic listening, reassurance, motivational interviewing, and collaborative goal-setting—can significantly enhance patients' engagement with preventive services, including regular screening (Peyrot et al., 2019; Fisher et al., 2019).

Effective GP–patient communication has been shown to reduce fear associated with screening and to reframe screening as a proactive and empowering component of self-care rather than a threat. When GPs explicitly address patients' concerns about potential complications and provide clear explanations of the benefits of early detection, patients are more likely to adhere to recommended screening schedules (Holt et al., 2021). Moreover, reinforcing self-efficacy and acknowledging patients' efforts in disease management can positively influence long-term preventive behaviors.

Social Support and Care Coordination

In addition to psychological support, GPs play a crucial role in addressing **social barriers** to screening adherence. By understanding patients' social contexts—including family dynamics, work obligations, and access constraints—GPs can tailor screening recommendations to individual circumstances. Involving family members in consultations, when culturally appropriate, has been associated with improved adherence and follow-up, particularly in chronic disease management (Baig et al., 2015).

GPs also act as coordinators of care, facilitating referrals to ophthalmology, nephrology, and other specialized services required for diabetes screening. Streamlined referral pathways, clear follow-up plans, and reminder systems initiated at the primary care level have been shown to improve attendance at screening appointments (Tricco et al., 2021). Furthermore, collaboration with nurses, diabetes educators, and social workers can enhance the delivery of comprehensive psychosocial support within primary care.

Implications for the Saudi Arabian Primary Care System

In Saudi Arabia, the role of GPs in enhancing diabetes screening adherence is particularly critical given the high national prevalence of diabetes and the structure of the healthcare system. Primary healthcare centers serve as the main entry point for chronic disease management, positioning GPs as gatekeepers for preventive services and specialist referrals. Saudi-based studies indicate that patients generally report high levels of trust in their primary care physicians, suggesting a strong foundation for GP-led psychosocial interventions (Al-Khaldi et al., 2020).

However, several challenges may limit the consistent implementation of psychosocially informed care in Saudi primary care, including time constraints, variability in training related to mental health and behavioral counseling, and limited integration of psychological services within primary healthcare centers. Despite these challenges, ongoing healthcare reforms aligned with **Saudi Vision 2030** emphasize strengthening primary care, enhancing patient-centered care, and integrating preventive and mental health services. These reforms present significant opportunities to expand the role of GPs in delivering psychosocial support to improve adherence to regular diabetes screening.

Overall, the literature underscores that general practitioners are not only providers of biomedical care but also key agents in addressing psychological and social factors that influence screening behaviors. Strengthening GP capacity to deliver psychosocially informed diabetes care may represent one of the most effective strategies for improving

screening adherence and reducing the burden of diabetes complications, particularly within high-prevalence contexts such as Saudi Arabia.

4. Diabetes Screening and Primary Care in Saudi Arabia

Saudi Arabia is among the countries with the highest prevalence of diabetes mellitus worldwide, representing a substantial public health and economic challenge. Rapid urbanization, lifestyle transitions, and high rates of obesity have contributed to the increasing burden of diabetes and its complications within the Kingdom. National reports and international estimates consistently indicate rising diabetes-related morbidity and healthcare utilization, underscoring the urgent need for effective preventive and early detection strategies (World Health Organization, 2023).

Primary healthcare serves as the cornerstone of diabetes prevention and long-term management in Saudi Arabia. In alignment with national health strategies and Vision 2030, the Saudi healthcare system has prioritized strengthening primary care services, expanding screening programs, and enhancing continuity of care for patients with chronic diseases. Within this framework, **diabetes screening in primary care extends beyond laboratory investigations to include radiological and imaging-based assessments**, which are essential for the early detection of diabetes-related complications (Saudi Ministry of Health, 2022).

Radiological screening plays a critical role in identifying both microvascular and macrovascular complications of diabetes. Commonly recommended imaging modalities include **retinal imaging for diabetic retinopathy**, **Doppler ultrasound for the assessment of peripheral arterial disease**, and **renal ultrasound for evaluating diabetic nephropathy and structural kidney changes**. International clinical guidelines emphasize that timely utilization of these imaging techniques significantly improves early diagnosis, facilitates prompt intervention, and reduces the risk of irreversible organ damage (American Diabetes Association, 2024).

Despite the availability of imaging services within many Saudi healthcare facilities, adherence to recommended diabetes screening—particularly **radiological screening**—remains inconsistent. Evidence from Saudi-based studies suggests that patients often underutilize imaging investigations due to limited awareness of their importance, fear of abnormal findings, psychological distress, cultural beliefs, and reliance on symptom-driven healthcare-seeking behaviors. These barriers highlight that access to radiological services alone is insufficient to ensure optimal screening uptake and that patient-related psychosocial factors must be addressed.

General practitioners (GPs) occupy a pivotal position in overcoming these challenges within the Saudi primary care context. As first-contact physicians and coordinators of chronic disease management, GPs are responsible for initiating screening referrals, explaining the purpose and benefits of radiological investigations, and alleviating patient concerns related to imaging procedures. Through effective communication, psychosocial support, and culturally sensitive counseling, GPs can enhance patient acceptance of and adherence to recommended radiological screening pathways.

In the context of Saudi Arabia's ongoing healthcare transformation, integrating **radiological diabetes screening into psychosocially informed primary care** represents a strategic opportunity to improve early detection of complications and overall disease outcomes. Strengthening the role of GPs in promoting imaging-based screening—while addressing psychological and social determinants of health—aligns closely with national priorities for preventive care, patient-centered services, and sustainable healthcare delivery.

5. Barriers and Facilitators to GP-Led Psychosocial Support for Diabetes Screening in Saudi Arabia

While the role of general practitioners in enhancing adherence to diabetes screening through psychosocial support is well recognized, the effective implementation of such approaches is influenced by multiple **barriers and facilitators** operating at the patient, provider, and health system levels. Understanding these factors is essential for translating evidence-based recommendations into routine primary care practice, particularly within the Saudi healthcare context.

Barriers to GP-Led Psychosocial Support

One of the most frequently reported barriers is time constraint within primary care consultations. General practitioners often manage high patient volumes, limiting opportunities for in-depth psychological assessment or exploration of social determinants during routine visits. This challenge has been documented internationally and echoed in Saudi primary healthcare settings, where consultation time is frequently prioritized for biomedical management over psychosocial discussion (Al-Khaldi et al., 2020).

Another significant barrier relates to limited training and confidence among GPs in addressing psychological distress and social issues. Many primary care physicians report insufficient formal training in mental health screening, counseling skills, and behavioral change techniques, which may reduce their willingness to engage in psychosocial care. In Saudi Arabia, variability in GP training backgrounds and limited integration of behavioral health education within primary care curricula further contribute to this gap (Alramadan et al., 2018).

Cultural and societal factors also represent important barriers. Stigma surrounding mental health, reluctance to disclose emotional difficulties, and cultural norms emphasizing stoicism may prevent patients from openly discussing psychological distress. This can hinder GPs' ability to identify psychosocial barriers affecting screening adherence. Additionally, some patients may perceive screening primarily as a response to symptoms rather than a preventive measure, reducing the perceived relevance of psychosocial counseling (Al-Shahrani et al., 2020).

At the system level, **fragmentation of care and limited integration of mental health and social services** within primary healthcare centers may restrict GPs' ability to refer patients for additional psychosocial support. Inadequate referral pathways, limited availability of allied health professionals, and lack of coordinated follow-up mechanisms further challenge the sustainability of GP-led psychosocial interventions.

Facilitators of Psychosocially Informed GP Practice

Despite these challenges, several facilitators have been identified that can enhance the role of general practitioners in promoting diabetes screening adherence through psychosocial support. **Strong patient–physician trust**, which is widely reported in Saudi primary care, represents a key enabler. Patients who trust their GPs are more receptive to counseling, education, and preventive recommendations, including regular screening (Alshammari et al., 2019).Continuity of care is another critical facilitator. Long-term relationships between GPs and patients allow for gradual exploration of psychological and social issues, normalization of screening practices, and reinforcement of preventive behaviors over time. Evidence suggests that continuity is associated with improved chronic disease outcomes and greater adherence to preventive services (Starfield et al., 2005).

System-level reforms aligned with Saudi Vision 2030 also serve as important facilitators. Ongoing efforts to strengthen primary care, expand preventive services, and integrate mental health into primary healthcare provide a supportive policy environment for psychosocially informed diabetes care. The expansion of electronic health records and appointment reminder systems further supports screening adherence by facilitating follow-up and care coordination.

Finally, targeted training and multidisciplinary collaboration have been shown to enhance GP capacity to address psychosocial determinants of health. Educational interventions focusing on communication skills, motivational interviewing, and basic mental health screening can significantly improve GP confidence and effectiveness. Collaboration with nurses, diabetes educators, psychologists, and social workers enables a team-based approach that reduces the burden on individual practitioners while enhancing comprehensive patient support.

DISCUSSION

This narrative review highlights the central role of general practitioners in enhancing adherence to regular diabetes screening through the integration of psychological and social support within primary care. The synthesized evidence demonstrates that screening adherence is a complex, multifactorial behavior influenced not only by healthcare system availability but also by patients' emotional well-being, social context, and quality of interaction with healthcare providers. These findings reinforce the growing recognition that biomedical approaches alone are insufficient to optimize preventive care in chronic diseases such as diabetes.

Across international and regional studies, psychological determinants—including diabetes-related distress, depression, anxiety, and maladaptive health beliefs—emerge as consistent barriers to screening adherence. The reviewed literature indicates that patients experiencing emotional burden or fear of complications may actively avoid screening, despite understanding its clinical importance. This avoidance behavior underscores the importance of early identification of psychological distress within routine primary care and supports recommendations from international diabetes guidelines that emphasize psychosocial assessment as a standard component of diabetes management.

Social determinants of health further compound these challenges. Family dynamics, socioeconomic constraints, health literacy, and work-related pressures significantly shape patients' ability and willingness to attend regular screening. In the Saudi context, strong family structures may act as both facilitators and barriers, depending on how preventive care is perceived within the household. Reliance on symptom-driven care and limited understanding of the preventive nature of screening have been repeatedly identified as contributors to delayed or missed screening, highlighting the need for culturally sensitive education and engagement strategies.

The review also underscores that general practitioners are uniquely positioned to address these intertwined psychological and social factors. Through continuity of care, trust-based relationships, and frequent patient contact, GPs can normalize screening, reduce fear, enhance self-efficacy, and tailor recommendations to patients' social circumstances. Evidence suggests that even brief, low-intensity psychosocial interventions delivered in primary care can positively influence preventive behaviors. These findings are particularly relevant in Saudi Arabia, where patients report high levels of trust in primary care physicians, providing a strong foundation for GP-led psychosocial support.

However, the review also identifies persistent barriers that limit the consistent implementation of psychosocially informed care. Time constraints, limited training in mental health and behavioral counseling, and insufficient integration of psychological and social services within primary healthcare settings remain significant challenges. These barriers are evident both globally and within Saudi primary care, suggesting that system-level solutions are required to support individual practitioner efforts.

The ongoing healthcare transformation in Saudi Arabia, aligned with Vision 2030, offers a timely opportunity to address these challenges. Strengthening primary care, integrating

mental health services, expanding multidisciplinary teams, and leveraging digital health tools may enhance GP capacity to support screening adherence. Importantly, addressing psychosocial determinants of screening adherence aligns closely with national priorities focused on prevention, patient-centered care, and long-term sustainability of the healthcare system.

Overall, this review supports a paradigm shift toward holistic, psychosocially informed primary care as a key strategy for improving adherence to regular diabetes screening. Future research should focus on evaluating GP-led psychosocial interventions within the Saudi context, identifying best practices, and assessing their impact on screening uptake and long-term clinical outcomes.

CONCLUSION AND IMPLICATIONS FOR PRACTICE AND POLICY

This review demonstrates that adherence to regular diabetes screening is strongly influenced by psychological and social determinants that extend beyond traditional biomedical factors. General practitioners play a pivotal role in addressing these determinants through psychosocial support, patient education, family engagement, and coordinated care within primary healthcare settings.

In Saudi Arabia, where diabetes prevalence is high and screening services are widely available, improving adherence requires greater emphasis on the psychosocial dimensions of care. Integrating routine psychological assessment, enhancing GP training in behavioral and communication skills, and strengthening multidisciplinary collaboration may significantly improve screening uptake and early detection of diabetes-related complications.

From a policy perspective, aligning diabetes screening initiatives with broader strategies addressing social determinants of health and mental well-being is essential. Supporting GPs through structured guidelines, adequate consultation time, and integrated referral pathways can enhance the effectiveness of preventive care. Ultimately, adopting a holistic, patient-centered approach within primary care has the potential to reduce the burden of diabetes complications and improve long-term health outcomes for people living with diabetes in Saudi Arabia.

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