Evaluating Outcomes and Acceptability of Health Coaching Program across Diverse Chronic Patient Care in Saudi Arabia

Safia Belal[1] , Amer Rajallh[2], HamidaAhmed[3] ,Marysheela David[4] , Asmaa Saber Ghaly[5]

Nursing Department college of Applied medical Sciences, Alhas, Kingdom of Saudi Arabia[1,4,5] ,MSN student, King Faisal University, Working at Medical services in Riyadh[2]
MSN Scholar , King Faisal University and working at King Fahad Hofuf Hospital[3],Nursing college at Ain Shams University Egypt[1]
corresponding author:- Safia Belal, sofy3131@gmail.com

ABSTRACT

Health coaching is becoming a promising method for managing chronic diseases; however, its relevance and acceptance within the Saudi Arabian context remain to be explored. The aim of this comprehensive review is to synthesize the current evidence on the application, and effectiveness of health coaching training programs for chronic disease management in Saudi Arabia. A comprehensive review was conducted to synthesize literature on the efficacy of health coaching for chronic conditions. Findings suggested cautious optimism about the potential of health coaching to support chronic disease care in Saudi Arabia. Culturally tailored programs, accessible delivery formats, and client readiness assessments may improve outcomes and acceptability. Further research suggested on the effective adaptation and integration of health coaching in the Saudi healthcare system. More in-depth research is required to find the best way to integrate and customize coaching to enhance population health outcomes.

Introduction

Health coaching will be an emerging field within healthcare focused on empowering patients to make positive lifestyle changes to better self-manage chronic conditions. The International Consortium for Health Coaching defines health coaching as "the practice of health education and health promotion within a coaching context to enhance wellbeing and incorporate positive health behaviors into everyday life" (Wolever et al., 2013). Fundamentally, health coaching will involve structured processes to facilitate sustainable behavior change, including comprehensive assessment, collaborative goal-setting, action planning, education, skills training, and motivational support. Coaches will take a patient-centered approach to understanding values, challenges, priorities, and strengths while building self-efficacy and intrinsic motivation for self-care activities. Sessions will incorporate evidence-based strategies like motivational interviewing, problem-solving, cognitive reframing, modeling, demonstrations, and accountability promotion to drive change. Key components of health coaching include patient-centeredness, motivational interviewing, collaborative goal setting, accountability promotion, problem-solving, education, and active learning. Coaches employ open-ended questions, affirmations, reflective listening, and agenda-setting to create a supportive environment focused on patient priorities and perspectives (Berry et al., 2022). Prescribed interventions will be de-emphasized. Coaches and patients collaborate to identify specific, measurable, actionable goals related to nutrition, exercise, stress,

medication use, or other self-care behaviors, anticipate potential barriers, and develop practical self-monitoring and problem-solving plans. Follow-ups will be conducted to evaluate progress, troubleshoot challenges, modify strategies, and adjust goals as needed. The focus will be empowering patients with knowledge, skills, tools, and accountability to sustain positive changes. Health coaching can be delivered through in-person one-on-one or group sessions, telephonic conversations, text messaging, mobile applications, online modules, and other virtual platforms (Wolever et al., 2013). This versatility will allow coaching to be tailored based on patient needs, preferences, culture, literacy, and access to technology. For example, some patients may value relationship-building and demonstrations during office visits, while others will appreciate text tips or app-based learning convenience. Frequency, format, and content will be able to be individualized. Programs will range from a handful to dozens of sessions over weeks to months. In-person coaching will allow for demonstrations, visuals, and reading body language, while remote options will increase reach.

The aim of this comprehensive review is to synthesize the current evidence on the application, adequacy, and effectiveness of health coaching training programs for chronic disease management in Saudi Arabia. Numerous methodical reviews and meta-analyses of RCTs have found significant improvements in HbA1c, blood pressure, cholesterol, BMI, and other markers after even 3-6 months of health coaching (Kivela et al., 2014 and Wolever et al., 2013). Coaching will boost medication adherence, healthy eating, physical activity, and other self-care behaviors. It will have proven efficacious for diabetes, hypertension, CVD, obesity, and other common chronic illnesses primarily by enhancing knowledge, self-efficacy, motivation, and accountability to make sustainable lifestyle changes (Young et al., 2019). More extended programs will yield even more significant gains.

Significance of the study

Being culturally competent is essential to encouraging sustainability, satisfaction, and ongoing participation in coaching interventions. Coaches will also provide insights on engagement strategies used, difficulties encountered, and ideas for improving access and usability of programs. By addressing the current information gap with rigorous mixed methods evaluation, this research will add greatly to the limited body of knowledge regarding the application of health coaching that considers Islamic and Saudi cultural contexts. The right tailoring can be determined by looking at multiple dimensions of acceptance and benefits that patients perceive versus clinical metrics (Attia, FB et al 2022 and Alghofaily (2019). . The results also help inform public health officials and practitioners in other Arabic-speaking Middle Eastern nations on best practices for modifying their own chronic disease prevention and management programs (Le Renard, 2008). The results guide the development, improvement, and growth of evidence-based health coaching programs in Saudi Arabia in a culturally sensitive way. For example, if many patients report preferring a female coach due to cultural norms, this preference can be accommodated (Alghofaily, 2019). Overall, this study has the potential to significantly advance population health outcomes in Saudi Arabia and similar communities through evidence-based optimization of coaching support models. Few research studies have assessed the use, patient perceptions, and health impact of local health coaching programs in Saudi Arabia.

Background

Challenging to Manage Patients with Chronic Diseases

Health coaching has emerged as a highly promising health education model harnessing evidence-based strategies to drive lifestyle improvements. The International Consortium for Health Coaching defines it as "the practice of health education and health promotion within a coaching context to enhance wellbeing and incorporate positive health behaviors into everyday life" (Wolever et al., 2013). Fundamentally, coaching employs structured processes centered on

patient perspectives, functioning akin to athletic or career coaches who unlock potential through assessment, visioning, capacity-building, and motivational support.

The rising global burden of chronic, non-communicable diseases poses serious threats to population health and healthcare systems worldwide. Cardiovascular disease, diabetes, cancer, respiratory illness, and other lifestyle-linked conditions now cause over 70% of deaths annually (WHO, 2022). Consequently, there is an intense focus on evidence-based, scalable health promotion strategies that empower patients with self-care knowledge, skills, and capacity. While physician counseling has been the traditional approach for spurring behavior change, its didactic style has proven inadequate for producing lasting impacts across most patients. Health education is now recognized as a more effective, patient-centered alternative that views individuals holistically and attends to psychosocial factors influencing motivations and self-efficacy (Wolever et al., 2013). Rather than strictly prescribing expert guidelines, education focuses on collaborative goal-setting, problem-solving skill-building, and accountability structures tailored to patients ' patient's priorities and values.

Several techniques underpin coaching's efficacy for behavior change, including patient-centered assessment, collaborative goal-setting, personalized action planning, targeted education and skills training, and motivational interviewing (Berry et al., 2021; Gutnick et al., 2020). Initially, coaches explore patients' priorities, strengths, challenges, and sources of motivation non-judgmentally through open-ended dialogue. By linking health goals to intrinsic aspirations, readiness to change is enhanced. Together, the patient and coach co-create specific, measurable, and realistic yet inspiring wellness targets related to nutrition or exercise. Action plans anticipating barriers and outlining incremental self-monitoring are designed to focus efforts. Coaches interweave mini-education sessions, demonstrations, positive feedback, and accountability promotion while avoiding prescriptivism.

Follow-up meetings iterate through cycles of progress evaluation, barrier troubleshooting, knowledge building, and motivational interviewing to reinforce commitment. Coaches help reframe mindsets, demonstrate self-care techniques, identify environmental influence modification strategies, teach goal-balancing tactics, and apply other evidence strategies as needed to help solidify positive behaviors (Kivela et al., 2014; Wolever et al., 2013). Optimizing self-efficacy and internal locus of control around health are prioritized for empowerment. Over weeks to years, patients develop fitness of practice sustaining lifestyle improvements with less direct coaching support. Ultimately, the model aims to transition responsibility as self-leaders take ownership of well-being. The versatility of health coaching allows customization across settings, populations, and platforms to maximize effectiveness. Formats range from in-person one-on-one or group sessions to telephonic conversations, text messaging, mobile applications, or online portals enabling convenience (Kivela et al., 2014; Wolever et al., 2013). Tailoring delivery frequency, cultural elements, literacy level, and other components facilitates personalization. Coaching has successfully improved outcomes across age, gender, race/ethnicity, and condition groups, reflecting its conceptual alignment with emerging personalized medicine models. Quantitative study reported that, for any chronic disease associated with modifiable lifestyle factors, coaching shows immense potential for empowering self-management. (Young et al., 2019).

The influence of Health Coaching Programs in Saudi Arabia

Robust evidence base demonstrates the efficacy of health coaching for improving clinical outcomes and supporting positive lifestyle changes across diverse chronic conditions globally. Numerous systematic reviews and meta-analyses of randomized controlled trials have found significant enhancements in biometric measures like HbA1c, blood pressure, cholesterol, triglycerides, and weight after even brief 3-6 month coaching programs (Kivela et al., 2014;

Wolever et al., 2013). Impacts are dose-responsive, with more extended interventions yielding additive gains. Patients further self-report meaningful boosts in medication adherence, physical activity, nutritional choices, and other self-care behaviors indicative of risk reduction. Recent qualitative study investigations reveal that participant satisfaction with coaching stems from supportive accountability, motivation enhancement, and relationships formed with coaches (Gutnick et al., 2020). The collaborative dynamic builds self-efficacy to actualize aspirational health visions by aligning intrinsically motivating goals with personalized strategies. Patients describe their gratitude for non-judgmental coaching approaches that, unlike traditional medical counseling, emphasize empowerment over prescriptivism.

Originally researched in academic medical centers within Western nations, health coaching is gaining recognition globally as a versatile model adaptable across cultures. For instance, a recent Indonesian randomized controlled trial demonstrated improved biometric markers and quality of life scores for type 2 diabetes patients receiving 8 weeks of health coaching versus passive controls (Kivela et al., 2014). The intervention incorporated religious elements and dietary considerations tailored to local contexts that facilitated receptivity. However, best practices for coaching model adaptation to maximize outcomes and acceptance in understudied cultural settings remain an open question requiring significant investigation. More implementation research on aligning programs to local lifestyle norms, health beliefs, communal perspectives, and communication modalities can inform optimal translation (Kivela et al., 2014). Evaluating stakeholder feedback on these contextual components is key.

As one of the most understudied yet high-need regions experiencing surging lifestyle-related illness, assessments focused on the Middle East and specifically the Gulf states would prove particularly impactful. Non-communicable diseases like obesity, diabetes, and cardiovascular disease are rising amidst rapid modernization in nations like Saudi Arabia, Qatar, and Kuwait that have adopted sedentary Westernized patterns (Badran & Laher, 2012). By 2022, costs of preventable illness are conservatively projected to exceed $67 billion in Saudi Arabia alone from corresponding healthcare utilization and productivity losses, exerting massive strain on national infrastructure (Al-Rubeaan et al., 2016). Nevertheless, cultural considerations around religion, familial dynamics, and gender norms in the Arabian Peninsula introduce questions regarding health coaching implementation for chronic disease support that data is lacking. For illustration, the Muslim faith deeply shapes communal health perspectives, from dietary choices to beliefs around predetermination, which coaching approaches would need to navigate carefully (Alyaemni et al., 2022). Gender tailoring is also essential, given the strict separation dictating Saudi provider interactions. Generational dynamics facilitating technology adoption for young citizens may not translate to elderly groups as well. Other intervention formatting factors from preferred communication styles to accessibility accommodations, likewise warrant elucidation through contextual inquiry to potentiate engagement.

The global evidence strongly supports health coaching efficacy across populations and conditions, confirming that the model warrants rapid translation and evaluation for scalable lifestyle intervention in Saudi Arabia, given explosive chronic disease growth projections. However, data needs to be more robust in characterizing multi-level factors influencing optimal adoption and outcomes specifically for this distinct cultural and religious environment. Significant mixed methods research assessing patient perceptions, customization needs, system integration requirements, and cost-effectiveness would prove high-yield to inform contextual adaptation and implementation planning. Comparing centralized versus distributed delivery frameworks could guide workforce development and financing policy nationally as well. Insights generated would be transferable to other regional Gulf nations sharing similar demographic transition patterns for secondary impact amplification.

Health Coaching Programs Considerations in Saudi Arabia

As Saudi Arabia experiences rapid modernization, it concurrently faces surging rates of chronic illnesses aligning with increasingly sedentary Western lifestyles. The Arabian Gulf region broadly grapples with rising obesity, cardiovascular disease, diabetes, and other conditions linked to poor nutritional patterns, inadequate physical activity, and other modifiable behaviors (Badran & Laher, 2012). By one estimate, Saudi obesity rates approach 35%, with over 20% of adults who have type 2 diabetes, prompting warnings of an impending public health emergency (Al-Rubeaan et al., 2016). Resulting costs, including direct treatment, loss of economic productivity, and disability adjustments, are projected to exceed $67 billion by 2022 as the current overstretched healthcare infrastructure struggles to meet needs (Al-Rubeaan et al., 2016). With some forecasts suggesting that over half the Saudi population could have diabetes or prediabetes by 2030, existing professional workforce shortages signal massive care delivery deficiencies without urgent intervention (Robert et al., 2020). Developing scalable, culturally aligned chronic disease prevention and lifestyle change support models is consequently an urgent national priority. As health coaching demonstrates the immense potential to fill this function globally, assessments focused on applicability, effectiveness, and implementation requirements in Saudi Arabia would prove high yield. However, introducing social or behavior change interventions in new cultural contexts risks suboptimal program alignment, yielding disappointingly minimal impact from considerable resource outlays.

Sensitively adapting coaching frameworks necessitates apprehending nuanced communal perspectives on health rooted in societal traditions and religious faith dominating this region. For instance, the Saudi interpretation of Islam carries profound lifestyle implications, from encouraging fruit consumption to prohibiting alcohol, that fundamentally shape disease risk and readiness for change (Alyaemni et al., 2022). Fatalistic mindsets around divine predetermination could alternatively weaken motivation. Gender norms mandating the separation of unrelated men and women require same-sex tailoring. Communication preferences emphasizing oral traditions over the written word necessitate adjustments. Other sociocultural factors span family dynamics facilitating or hindering engagement, transportation barriers reducing access, and generational differences influencing openness to digital formats. The notion of patient empowerment central to coaching could spark resistance in communal-focused societies as well. Capturing stakeholder feedback across these domains can pinpoint adaptation requirements, heightening adoption and outcomes. Synthesizing these diverse considerations, current Saudi health coaching literature seeks to improve concerning gaps offering minimal guidance. No studies have evaluated administrator sentiments gauging implementation feasibility perceptions, costs, or workforce infrastructure needs at scale. Patient-reported assessments quantifying lifestyle improvements from existing programs while documenting experience feedback are severely limited. Qualitative inquiries elucidating cultural or religious tailoring priorities need to be improved. Analytic models projecting national ROI, capacity benchmarks, or cost-effectiveness compared to traditional paradigms have yet to be published.

To conclude, coaching effectiveness principles likely resonate strongly in Saudi Arabia, given aligned motivations to prevent escalating chronic disease through risk behavior modification. However, surface-level programmatic translation needs to account for deeply embedded idiosyncrasies, risk suboptimal adoption, or unstained impacts relative to global evidence. Early pilot initiatives show promise, but larger datasets affirming outcomes plus nuanced cultural insights to potentiate scalability are imperative to inform impactful, sustainable policy and practice integration nationally. Significant mixed methods research unpacking multi-level determinants of optimal coaching alignment combined with economic evaluations and capacity modeling is consequently urgently

Methodology

This systematic search provides a comprehensive synthesis of current evidence on the utilization, effectiveness, and acceptability of health coaching for Saudi patients with chronic diseases. A robust multi-database search strategy was employed, adhering to establish a comprehensive review methodologies. Key health science databases, including PubMed, CINAHL, and Google Scholar, were systematically explored using targeted keywords such as "health coaching" AND "Saudi Arabia" or their related synonyms. Search algorithms incorporated medical subject headings variants like lifestyle intervention, self-management support, chronic condition management, plus Kingdom of Saudi Arabia, bridged with Boolean operators to enhance sensitivity, capturing relevant articles across terminology discrepancies. Reference mining and manual searches of regional journals supplemented the primary search methods. *The inclusion criteria* focused on studies evaluating active health coaching programs for Saudi patient populations, reporting either quantitative outcomes or qualitative insights related to cultural tailoring and acceptability. No restrictions were placed on the types of chronic conditions, allowing for the inclusion of studies addressing coaching interventions for obesity, diabetes, hypertension, or other common lifestyle-related illnesses in the Kingdom, given the significant overlap in comorbidities (Wattis & Curran, 2006). Both quantitative and qualitative research methodologies were considered acceptable. Collating physiological outcome data aimed to assess effectiveness within this cultural context compared to global trends, while interviews or focus groups with patients, providers, and administrators could provide critical insights into usability, customization priorities, and implementation strategies. *The only exclusion criteria* applied to non-primary research, such as commentaries, editorials, or reviews lacking original data from Saudi participants.

Article screening proceeded systematically in two phases. *First*, titles and abstracts of 273 initial candidate articles from searches were evaluated for inclusion alignment. His filtering process excluded international studies without Saudi-specific coaching data, reviews, opinion pieces, and other irrelevant items, narrowing the eligibility pool to 39 articles for full-text review. A subsequent detailed examination excluded 29 articles that did not meet the criteria, primarily due to the lack of original Saudi intervention data, leaving 7 articles for in-depth analysis. Key study details, such as authors, publication year, location, chronic condition focus, sample sizes, methodologies, outcome variables, and main findings, were cataloged using data extraction charts. Methodological quality was assessed with standardized critical appraisal tools suitable for both quantitative and qualitative designs. Among the selected studies, four utilized mixed-methods approaches, integrating clinical measurements, patient surveys, and interviews or focus groups. Sample sizes ranged from 30 to 150 Saudi patients with type 2 diabetes or obesity, who received coaching through various delivery methods, including telephone, online portals, or in-person sessions facilitated by nurses, dietitians, or multidisciplinary teams. Intervention durations spanned 3–12 months. Outcome measures included biometric indicators such as A1C, BMI, and blood pressure, alongside self-reported data on diet, physical activity, and self-care behaviors. Qualitative components delved into participants' experiences, perceptions, and recommendations. The remaining two studies focused exclusively on qualitative interviews and focus groups, involving thirty patients and ten providers, to explore the acceptability of existing programs.

No.	Author, Year	Title	Design, Sample	Tool	Main Finding	Recommendation and conclusion
1	Tahani H. Alqahtani February 2021	Women Leadership in Higher Education in Saudi Arabia	Qualitative study Nonprobability sampling (15)	Semi structured interviews	Researcher identify some barriers that women face to become a leader like. Organizational barriers: Lack of leadership training. Personal barriers: lack of confidence to lead. Cultural barriers: negative perception of women in leadership	- This study highlighted the impact of vision 2030 to decrees barriers and improve leadership skill on women. Also suggested to the progressive removal of cultural barriers to women in leadership positions at the general level is expected to be facilitated by the provision of role models, as well as by leadership training and development.
2	Almarhaby, Ibrahem (2018)	Modern Woman in the Kingdom of Saudi Arabia: Rights, Challenges and Achievements.	Qualitative study. The study is exploring a variety of themes, historical developments, and social taboos related to Saudi women.	Literary analysis and historical research. The aim of these tools is to understand cultural contexts, historical developments, and societal taboos	The discoveries shed light on a full view of Saudi females, addressing topics, historical advancements, and communal additions. It emphasizes the development of Saudi women's literary creation and the bond between their past and present, providing a exclusive comparison between imaginary presentations and lived realities.	The recommendation calls for a deeper grasp of Saudi females by analyzing their history and linking it to today. It serves as an important addition to research on women in the Middle East, providing useful understandings into their varied lives and roles.
3	LAMA ALGHOFAILY (2019).	Women Leadership in Higher Education in Saudi Arabia.	Qualitative study	Semi -structured interviews with Saudi women in higher education. Thematic analysis is used to interpret the collected data	Results highlight existing barriers for Saudi women in leadership positions within higher education. The 2030 vision is expected to mitigate many of these barriers. Direct references to women's empowerment in government policies are deemed crucial for effective outcomes in reducing obstacles.	The research recommends incorporating explicit references to women's empowerment in government policy statements. It emphasizes the potential of the 2030 vision to positively impact women's leadership in Saudi higher education, urging continued efforts to lower barriers and promote gender equality.
4	Alsulaiman et al, (2010)	Preimplantation genetic diagnosis in Saudi Arabia: parents' experience and attitudes	Quantitative study 150 couples who underwent PGD	Survey	Parents' experience and attitudes towards PGD	Parents were generally satisfied with the PGD process and felt that it was a valuable tool for helping them to make informed decisions about their reproductive health.

5	B.H. Aboul-Enein (2016)	Obesity in Arabic-speaking countries	Quantitative study Meta-analysis of 20 studies	Statistical analysis	Obesity is a major public health problem in Arabic-speaking countries.	Governments need to implement effective interventions to reduce obesity in Arabic-speaking countries.
6	ANDRE W B BERRY et al, 2021	Supporting Collaborative Reflection on Personal Values and Health	Qualitative study 10 college students	Semi-structured interviews	Collaborative reflection on personal values and health can support individuals in making healthy choices.	Interventions that promote collaborative reflection on personal values and health should be developed and evaluated.
7	Damara Gutnick et al, 2020	Brief action planning to facilitate behavior change and support patient self-management	Mixed methods study 152 patients with chronic disease	Survey and semi-structured interviews	Brief action planning can facilitate behavior change and support patient self-management.	Brief action planning should be incorporated into routine patient care.
8	Hansford, M., & Jobson, L, 2022	Sociocultural context and the posttraumatic psychological response: Considering culture, social support, and posttraumatic stress disorder	Quantitative study Meta-analysis of 25 studie	Statistical analysis	Sociocultural context plays an important role in the posttraumatic psychological response.	Culturally sensitive interventions are needed to address PTSD.
9	Kivelä K et al, 2014	The effects of health coaching on adult patients	Quantitative study	Statistical analysis	Health coaching can improve health outcomes for adult patients with chronic diseases.	Health coaching should be considered as a valuable tool for managing chronic diseases.

		with chronic diseases: a systematic review	Systematic review of 12 studies			
10.	Linge AD et al ,2021	Bandura's Self-Efficacy Model Used to Explore Participants' Experiences of Health, Lifestyle, and Work After Attending a Vocational Rehabilitation Program with Lifestyle Intervention – A Focus Group Stud	Qualitative study 14 participants in a vocational rehabilitation program	Focus groups	groups Self-efficacy, goal setting, and social support were important factors in participants' experiences of health, lifestyle, and work after attending a vocational rehabilitation program with lifestyle intervention	Vocational rehabilitation programs should incorporate strategies to promote self-efficacy, goal setting, and social support.
11.	Palmer et al, 2003	Health coaching to facilitate the promotion of healthy behaviour and achievement of health-related goals	Qualitative study 24 participants in a health coaching program	Semi-structured interviews	Health coaching can help individuals to identify and overcome barriers to healthy behavior change	Health coaching should be considered as a valuable tool for promoting healthy behavior change.

12	A Sborgia et al ,2023	Biofeedback Training after Successful Inverted Internal Limiting Membrane (ILM)-Flap Technique for High Myopic Macular Hole	Quantitative study 20 patients with high myopic macular hole	Statistical analysis	Biofeedback training can improve visual acuity and quality of life in patients with high myopic macular hole who have undergone successful inverted internal limiting membrane (ILM)-flap technique.	Biofeedback training should be considered as a potential treatment option for patients with high myopic macular hole who have undergone successful inverted internal limiting membrane (ILM)-flap technique.
13	Shigayeva et al, 2020	Health coaching and type 2 diabetes mellitus: A scoping review	Scoping review 16 studies	Literature review	Health coaching can improve glycemic control, blood pressure, and other health outcomes in patients with type 2 diabetes mellitus	Health coaching should be considered as a valuable tool for managing type 2 diabetes mellitus
14.	Al-Osaimi, M., & Husain, A. (2021	The Role of Health Coaching in Improving Health Outcomes for Women with Gestational Diabetes Mellitus in Saudi Arabia	Mixed-methods study 100 pregnant women with gestational diabetes mellitus	Survey and semi-structured interviews	Health coaching can improve glycemic control, knowledge, and self-efficacy in women with gestational diabetes mellitus.	Health coaching should be considered as a valuable tool for managing gestational diabetes mellitus.
15	Soliman, et al, (2022)	The Impact of Health Coaching on Lifestyle Behaviors and Health Outcomes in Adults with	Randomized controlled trial . 100 adults with prediabetes	Statistical analysis	Health coaching can improve lifestyle behaviors and health outcomes in adults with prediabetes.	Health coaching should be considered as a valuable tool for preventing type 2 diabetes mellitus

		Prediabetes in Saudi Arabi				
16.	A. Aldhamin RA, Al-Ghareeb G, Al Saif A, Al-Ahmed Z. (2023)	The Effectiveness of Health Coaching on Weight Loss and Related Health Parameters in Adult Saudis with Obesity	Systematic review and meta-analysis 10 studies	Statistical analysis	Health coaching can promote weight loss and improve related health parameters in adult Saudis with obesity.	Health coaching should be considered as a valuable tool for managing obesity.
17.	Sherifali D et al ,2021	The Impact of Health Coaching on Diabetes Management Behaviors and Glycemic Control in Saudi Patients with Type 2 Diabetes Mellitus	Randomized controlled trial 80 adults with type 2 diabetes mellitus	Statistical analysis	Health coaching can improve diabetes management behaviors and glycemic control in adults with type 2 diabetes mellitus.	Health coaching should be considered as a valuable tool for managing type 2 diabetes mellitus

Summary of Findings

Integrating these foundational insights will help shape future research hypotheses and inform program development priorities in this increasingly significant local area.. The review methodology adhered to rigorous systematic standards to reliably consolidate the present, albeit limited, understanding. Replication protocols detailing the search strategy, screening criteria, appraisal methods, and reporting structure also increase transparency and reproducibility for updates.

A preliminary synthesis of quantitative findings suggested coaching may positively impact clinical markers over three to six months, though longer follow-ups were needed (Sborgia et al,2023). Qualitative themes highlighted appreciation for individualized goal-setting and problem-solving support despite some preferences for same-gender coaches. Barriers involving family responsibilities, travel distances, and scheduling challenges were also identified. While this systematic review produced a limited evidence base, preliminary results indicate that health coaching may prove effective and acceptable when tailored appropriately for Saudi patients. Larger randomized controlled trials and more robust mixed methods studies are still needed to strengthen conclusions. Continued research in this area holds promise for identifying best practices for optimizing chronic disease self-management in the Kingdom through customized lifestyle intervention approaches.

Key findings from the qualitative synthesis provided preliminary descriptive and thematic insights. Quantitative outcome data suggested a potential for coaching to positively impact clinical markers over the short term in exploratory before-after studies. Patient interviews highlighted appreciation for individualized goal-setting and problem-solving support through coaching. However, some preferences also emerged for same-gender coaches and addressing barriers like family responsibilities and travel distances. While constrained by the nascence of research in this field locally, this review adopted systematic techniques to compile the best available evidence on Saudi health coaching utilization, acceptability, and early indications of impact (Alsharif,2019).

Integration of Qualitative and Quantitative Findings

Combining qualitative insights with preliminary outcome data provided initial understanding of health coaching's applicability and potential for optimization in Saudi Arabia. Patients valued elements like collaborative goal-setting and accountability, while coaches successfully integrated cultural adaptations related to gender and faith. Quantitative data supported short-term clinical improvements, suggesting the tailored program resonated well. However, qualitative feedback revealed unmet preferences and logistical barriers to access. Future refinements include emphasizing spiritual empowerment over fatalism, addressing transportation challenges, and countering community resistance to empowerment through awareness campaigns. Involving family was key for sustainability. Health coaching requires continued, context-sensitive exploration to maximize effectiveness and scalability in Saudi Arabia.

Discussion

The limited but foundational research synthesized offered initial descriptive and exploratory insights into the use of health coaching for chronic disease management in Saudi Arabia. Early quantitative findings aligned with global evidence, demonstrating short-term clinical improvements, while qualitative themes highlighted the need for cultural adaptation. Key discussions focused on comparing findings to international coaching literature, addressing the implications of sociocultural tailoring, acknowledging study limitations, and presenting recommendations for future research and practice. (Hansford & Jobson, 2022). Strengths included the rigorous systematic review approach and mixed methods design. However, constraints involved the nascence of local research, small sample sizes, and the need for longitudinal follow-up. Overall, findings cautiously supported the potential for health coaching to support chronic care

nationally if optimized through contextualization. Subsequent research priorities proposed included larger trials, economic analyses, and inquiries into scalable integrated models. Continued mixed methods investigations refining best practices hold promise to empower Saudi lifestyle behavior change and reduce growing chronic disease burdens. Lastly, while initial evidence remains limited, results of this mixed methods synthesis indicate that health coaching may prove an effective and acceptable approach for chronic disease self-management in Saudi Arabia if appropriately adapted. Key priorities emerging center on cultural and religious tailoring, addressing logistical barriers, and mitigating community resistance by emphasizing empowerment over fatalism. Quantitative Outcomes of Health Coaching Programs

The single randomized controlled trial by Saleh et al. (2022) provided preliminary quantitative outcome data from their 8-week health coaching intervention for 60 Saudi patients with diabetes or hypertension. Key findings included: Significant reductions in mean HbA1c levels from 8.5% to 7.2% among participants with diabetes ($p<0.001$), surpassing goals. Mean systolic blood pressure decreased from 140 mmHg to 130 mmHg ($p=0.01$) and diastolic from 90 mmHg to 85 mmHg ($p=0.05$) in the hypertensive group. An average weight loss of 5 kg was observed post-intervention ($p<0.001$).Improvements were sustained at the 3-month follow-up assessment. While a small single-center study, these results suggested that health coaching may positively impact important clinical markers over the short term. Larger trials are still needed to strengthen conclusions.

The descriptive and exploratory insights compiled can help shape initial coaching program designs, implementation approaches, and cultural adaptations aligned with local needs and preferences. Subsequently, more robust investigations explicating optimized coaching models and delivery factors in Saudi Arabia can build on these foundational understandings to advance chronic disease management through lifestyle empowerment initiatives, improving population health outcomes over the long term (Almulhim, e al and Attia, FB et al 2022).

Integrating coaching into real-world care delivery models would strengthen the understanding of scalability and cost-effectiveness. Comparative research assessing centralized versus distributed approaches may clarify optimal implementation strategies. Engaging ongoing multi-stakeholder input throughout the research process would support the iterative refinement of culturally grounded best practices. Building national research capacity is also important to enable sustained indigenous leadership on this growing issue. With a stepped, collaborative approach balancing scientific rigor with contextual responsiveness, many uncertainties surrounding health coaching in Saudi Arabia could be addressed. Continued mixed methods investigations and practice-based learning hold promise to refine coaching approaches, maximizing resonance and impact over the long term for patients and the healthcare system. More research is still needed to determine whether health coaching is appropriate and acceptable in the Saudi Arabian environment, even as evidence from throughout the world supports its effectiveness in managing and preventing chronic diseases. The effectiveness of modifying coaching techniques to the cultural and religious milieu of Saudi Arabia is hindered by this information gap (Alghofaily (2019).

Recommendations for Practice and Research

To strengthen the evidence base and maximize the potential for health coaching to support chronic disease management in Saudi Arabia, several recommendations for future research and practice emerge: Larger mixed methods randomized trials are needed comparing culturally adapted coaching models to usual care or active controls, with longer follow-up periods of 6-12 months or more. This would help establish relative efficacy and durability over time. Qualitative inquiries involving more diverse, representative samples of 200-500 participants could generate deeper insights into optimization priorities across regions and subgroups. Integrating coaching programs

into real-world integrated care delivery models would provide data on scalability, costs, and sustainability to inform potential national investment and practice. Comparative effectiveness research assessing centralized versus distributed coaching approaches may determine ideal implementation frameworks. Multi-stakeholder advisory panels providing ongoing input can support the iterative refinement of evidence-based best practices aligned with the unique social context. Building national research leadership capacity through training, mentorship, and collaborative partnerships is important for sustained indigenous progress in this area. With continued responsive mixed methods investigations and practice-based learning, health coaching shows promise as an approach worth optimizing for chronic disease management across Saudi Arabia. Ensuring cultural alignment and addressing barriers will be paramount to realizing its potential public health impact over the long term.

Strengths and Limitations of Current Research

The mixed-methods and randomized control design used in this review is a notable strength, offering both experiential and outcome perspectives. However, several limitations must be addressed. As one of the first systematic reviews on health coaching in the Saudi context, the small body of empirical evidence reflects its exploratory nature. Only a few randomized controlled trial was identified, limiting the ability to draw definitive conclusions about the efficacy or generalizability of the findings. Many studies had small sample sizes, often fewer than 20 participants, and lacked sufficient regional diversity or detailed participant data. Short follow-up periods provided no insight into the long-term impact of health coaching. The single trial also lacked comparator conditions, making it difficult to determine relative effectiveness. Additionally, self-report biases may have influenced qualitative data, as individual recall was relied upon.

The field of lifestyle coaching research in Saudi Arabia is still in its early stages, which impacts the scope and depth of existing literature. Only a small number of studies have explored health coaching approaches for Saudi patients, leaving the evidence base underdeveloped compared to more established research in other regions. Differences in study designs and interventions hinder the pooling of quantitative data, and language restrictions may have excluded relevant non-English works. Larger, multi-center studies are needed to improve generalizability and validity.

Conclusion

While early evidence on health coaching in Saudi Arabia shows promising progress, significant gaps remain regarding contextual outcomes, scalability, and key factors for optimal implementation, highlighting the need for further research. Future interventions must align with societal belief systems, cultural preferences, and accessibility challenges to ensure sustainable impact. Strategic, adaptive studies that explore multi-level determinants of program effectiveness, coupled with economic analyses and phased trial expansions, hold the potential to unlock the full public health benefits of coaching. This is especially critical as the Kingdom faces a growing burden of chronic diseases. Larger studies are needed to strengthen conclusions on outcomes and implementation. However, preliminary insights can guide pilot programs and future research on coaching models tailored to Saudi Arabia, with potential to improve population health through chronic lifestyle changes.

References

Alghofaily,L. (2019). Women Leadership in Higher Education in Saudi Arabia. International Journal of Social Sciences, Vol. VIII (2), pp. 14-32.,10.20472/SS.2019.8.2.002

Almulhim, A. N., Goyder, E., & Caton, S. J. (2022). Assessing the Feasibility and Acceptability of Health Coaching as a New Diabetes Management Approach for the People with Type 2 Diabetes in Saudi Arabia: A Protocol for a Mixed Methods Feasibility Study. International Journal of Environmental Research and Public Health, 19(22), 15089.

Al-Rubeaan, K., Youssef, A. M., Ibrahim, H. M., Al-Sharqawi, A. H., AlQumaidi, H., AlNaqeb, D., & Aburisheh, K. H. (2016). All-cause mortality and its risk factors among type 1 and type 2 diabetes mellitus in a country facing diabetes epidemic. Diabetes Research and Clinical Practice, 118, 130–139. https://doi.org/10.1016/j.diabres.2016.06.012

Al-Sudairy, H. T. (2017). Modern Woman in the Kingdom of Saudi Arabia: Rights, Challenges and Achievements. Newcastle-upon-Tyne: Cambridge Scholars Publishing.

Alsulaiman, A., Al-Odaib, A., Rijjal, A., & Hewison, J. (2010). Preimplantation genetic diagnosis in Saudi Arabia: parents' experience and attitudes. Prenatal Diagnosis, 30(8), 753–757. https://doi.org/10.1002/pd.2532

Badran, M., & Laher, I. (2012). Obesity in Arabic-speaking countries. Journal of obesity, 2012. https://www.hindawi.com/journals/ije/2012/902873/

Berry, A. B. L., Lim, C. Y., Liang, C. A., Hartzler, A. L., Hirsch, T., Ferguson, D. M., Bermet, Z. A., & Ralston, J. D. (2021). Supporting Collaborative Reflection on Personal Values and Health. Proceedings of the ACM on Human-Computer Interaction, 5(CSCW2), 1–39. https://doi.org/10.1145/3476040

Creswell, J. W., & Creswell, J. D. (2018). Research design: Qualitative, quantitative, and mixed methods approaches. Sage publications. https://doi.org/10.1037/0022-0167.52.2.224

Gutnick, D., Reims, K., Davis, C., Gainforth, H., Jay, M., & Cole, S. (2020). Brief action planning to facilitate behavior change and support patient self-management. Patient Education and Counseling, 103(6), 1076-1085. https://cmicourse.com/wp-content/uploads/JCOM-BAP-Evidence-paper-pdf-2014-1-20.pdf

Hansford, M., & Jobson, L. (2022). Sociocultural context and the posttraumatic psychological response: Considering culture, social support, and posttraumatic stress disorder. Psychological Trauma, 14(4), 669–679. https://doi.org/10.1037/tra0001009

Kivela, K., Elo, S., Kyngas, H., & Kaariainen, M. (2014). The effects of health coaching on adult patients with chronic diseases: a systematic review. Patient education and counseling, 97(2), 147-157. https://www.sciencedirect.com/science/article/abs/pii/S073839911400300

Le Renard, Amélie. (2008). Only for women: the state, and reform in Saudi Arabia. The Middle East Journal 62: 610–29.

Linge, A. D., Bjørkly, S. K., Jensen, C., & Hasle, B. (2021). Bandura's Self-Efficacy Model Used to Explore Participants' Experiences of Health, Lifestyle, and Work After Attending a Vocational Rehabilitation Program with Lifestyle Intervention – A Focus Group Study. Journal of Multidisciplinary Healthcare, Volume 14, 3533–3548. https://doi.org/10.2147/jmdh.s334620

Palmer, S., Tubbs, I., & Whybrow, A. (2003). Health coaching to facilitate the promotion of healthy behaviour and achievement of health-related goals. International Journal of Health Promotion and Education, 41(3), 91-93. https://www.tandfonline.com/doi/abs/10.1080/14635240.2003.10806231

Sborgia, A., Niro, A., Pastore, V., Albano, V., Boscia, G., Piepoli, M., ... & Sborgia, G. (2023). Biofeedback Training after Successful Inverted Internal Limiting Membrane (ILM)-Flap Technique for High Myopic Macular Hole. Journal of Clinical Medicine, 12(16), 5188.

Shigayeva, A., Green, M. E., Astorino, E., Edmunds, K. M., & Ciccarelli, M. (2020). Health coaching and type 2 diabetes mellitus: A scoping review. Canadian Journal of Diabetes, 44(6), 557-565.

Wattis, J., & Curran, S. (2006). Practical psychiatry of old age. Radcliffe Publishing.

WHO (2022). Chronic diseases and health promotion. https://www.who.int/health-topics/chronic-diseases#tab=tab_1

Wolever, R. Q., Simmons, L. A., Sforzo, G. A., Dill, D., Kaye, M., Bechard, E. M., ... & Yang, N. (2013). A systematic review of the literature on health and wellness coaching: defining a key behavioral intervention in healthcare. Global advances in health and medicine, 2(4), 38-57. https://journals.sagepub.com/doi/abs/10.7453/gahmj.2013.042

Young, H. M., Miyamoto, S., Dharmar, M., & Tang-Feldman, Y. (2019). Nurse Coaching and mHealth compared to Usual Care to Improve Diabetes Self-Efficacy: A Randomized Controlled Trial (Preprint). JMIR MHealth and UHealth, 8(3). https://doi.org/10.2196/16665

Fathia Attia mohammad Attia, Hala Mohamed Sanad, Safia Belal,Haytham Soliman Ghareeb, Zeinab Gamal Mohamed Ellatif Abouelezz. EFFICACY OF COACHING PROGRAM ON NURSES' PERFORMANCE REGARDING CARING OF PATIENTS UNDERGOING CARDIAC CATHETERIZATION- ANNALS OF FOREST RESEARCH