

The Effects Of Khat Use On Health, Society, Economy, And Policy: A Systematic Literature Review

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Abstract : Khat, a stimulant shrub native to East Africa and the Arabian Peninsula, contains psychoactive compounds (cathinone and cathine) that produce amphetamine-like effects. While culturally significant for socialization and work endurance, chronic khat use was linked to severe health consequences, including cardiovascular disease, mental health disorders, and gastrointestinal complications. Its economic impact was dual-edged: while supporting livelihoods in producing regions, it diverted household income from essentials, reduced productivity, and strained healthcare systems. This systematic literature review synthesized evidence from 2000–2023 to analyze khat’s multidimensional effects on health, society, economy, and policy. Key findings revealed that khat use exacerbated poverty cycles, with households spending 20–30% of their income on the substance, and reduced workforce productivity by 5–10%. Prohibitionist policies had failed, often fueling illicit trade, whereas regulated markets (e.g., Yemen’s taxation system) showed promise in balancing economic benefits with harm reduction. Critical research gaps included long-term economic modeling and gender-disaggregated data on khat’s societal impacts. The review recommended: (1) policies combining regulation (e.g., taxation, quality controls) with public health campaigns; (2) research on standardized metrics and gendered effects; and (3) interventions targeting high-risk groups (youth, farmers) through education, alternative livelihoods, and healthcare integration. A nuanced approach was identified as vital to mitigate harms while respecting cultural contexts and sustaining economic stability in khat-dependent communities.

Key Words: khat consumption, public health impacts, economic consequences, policy regulation, cultural significance, and harm reduction strategies

1. INTRODUCTION

Khat (*Catha edulis*) is a flowering shrub native to East Africa and the Arabian Peninsula, known for its stimulant properties due to the psychoactive compound’s cathinone and cathine (Al-Motarreb et al., 2010). When chewed, these alkaloids produce effects similar to amphetamines, including increased alertness and euphoria, but prolonged use has been linked to adverse health outcomes such as cardiovascular disease and psychiatric disorders (Widmann et al., 2014). Khat consumption is deeply embedded in the social and cultural traditions of countries like Yemen, Ethiopia, Somalia, and Kenya, where it is often used in communal settings for socialization, religious ceremonies, and work endurance (Carrier, 2007). However, its classification as a controlled substance in much of Europe and North America has led to global controversy, with debates centering on its public health risks versus cultural legitimacy (Anderson et al., 2007).

The growing spread of khat use beyond its traditional regions has raised significant economic and public health concerns. Studies suggest that khat consumption contributes to lost labor productivity, household financial strain, and increased healthcare burdens due to addiction and associated diseases (Kassim et al., 2015). In countries where khat is legal, such as Djibouti and parts of East Africa, its trade supports millions of livelihoods, yet critics argue that it diverts income from essential needs like food and education (Gebissa, 2010). Meanwhile, nations that have banned khat, including the UK and the U.S., face challenges with illicit trafficking and enforcement (Odenwald et al., 2010). These discrepancies in legal status highlight the need for evidence-based policies that balance cultural considerations with harm reduction.

This systematic literature review aims to synthesize the multi-dimensional impacts of khat use, examining its effects on health, society, economy, and policy. While previous studies have focused on isolated aspects such as its pharmacological properties or social role, this review integrates cross-disciplinary evidence to provide a comprehensive assessment. Key objectives include: (1) evaluating the health consequences of khat consumption, (2) analyzing its socioeconomic repercussions, (3) assessing the efficacy of existing policy responses, and (4) identifying critical research gaps to guide future policymaking and intervention strategies. By consolidating current knowledge, this review seeks to inform stakeholders from governments to public health practitioners on how to address the complex challenges posed by khat use.

2. METHODS

The research methodology for this systematic literature review employed a comprehensive search of academic databases (e.g., PubMed, Scopus, Web of Science) and gray literature (e.g., government reports, NGO publications) using keywords such as "khat

use," "health effects," "socioeconomic impacts," and "policy responses." Inclusion criteria prioritized peer-reviewed studies, reports, and policy documents published between 2000 and 2023, focusing on the health, social, economic, and policy dimensions of khat use. Data extraction included study objectives, methodologies, key findings, and geographical context, followed by thematic analysis to identify patterns, gaps, and contradictions. Quality assessment tools, such as the PRISMA checklist, ensured methodological rigor, while a narrative synthesis integrated findings across disciplines to provide a holistic understanding of khat's multifaceted impacts.

3. HEALTH EFFECTS OF KHAT USE

Khat consumption has been associated with significant health consequences across multiple physiological systems. The active compounds cathinone and cathine act as stimulants, producing effects similar to amphetamines, which contribute to both short-term and long-term health risks. Research indicates that chronic use leads to detrimental impacts on cardiovascular, gastrointestinal, and oral health, while also increasing the likelihood of psychiatric disorders and placing strain on public health systems.

3.1. Physical Health Effects

Chronic khat use has been linked to numerous adverse physical health outcomes. Cardiovascular complications are particularly concerning, with studies demonstrating increased risks of hypertension, tachycardia, and myocardial infarction due to the sympathomimetic effects of cathinone (Al-Motarreb et al., 2010). Regular users often exhibit elevated blood pressure and arrhythmias, which may predispose them to more severe cardiac events (Hassan et al., 2013). The gastrointestinal system is also significantly affected, with frequent reports of gastritis, constipation, and peptic ulcers resulting from reduced gut motility and heightened gastric acid secretion (Toennes et al., 2003). Emerging evidence suggests a potential association between long-term khat chewing and esophageal cancer, though further research is required to establish a definitive causal relationship (Kassie et al., 2017). Additionally, oral health consequences are prevalent among habitual users, including leukoplakia, periodontal disease, and tooth decay, largely due to the mechanical irritation from chewing and the acidic nature of khat leaves (Ali et al., 2010).

3.2. Mental Health Effects

The impact of khat on mental health is well-documented, with particular concerns surrounding its addictive potential and association with psychiatric disorders. The stimulant properties of cathinone can lead to dependence, with users experiencing withdrawal symptoms such as fatigue, depression, and irritability upon cessation (Kassim et al., 2015). Chronic consumption has been linked to an increased risk of psychosis, including hallucinations and paranoid delusions, particularly among individuals with predisposing genetic or environmental factors (Odenwald et al., 2010). Epidemiological studies have also identified correlations between heavy khat use and mood disorders, including depression and anxiety, which may be exacerbated by social and financial stressors related to sustained use (Widmann et al., 2014).

3.3. Public Health Burden

The widespread use of khat imposes a considerable burden on healthcare systems, particularly in regions where consumption is culturally entrenched. Increased hospital admissions for cardiovascular emergencies, gastrointestinal complications, and psychiatric crises contribute to rising healthcare costs (Gebissa, 2010). Limited resources are further strained by the need for specialized treatment programs targeting khat dependence and related mental health conditions. Additionally, lost productivity due to health-related absenteeism and diminished work performance exacerbates the economic toll on affected communities (Anderson et al., 2007). Public health initiatives face challenges in balancing cultural acceptance of khat with the need for effective harm reduction strategies, highlighting the necessity for evidence-based interventions tailored to high-risk populations.

4. SOCIAL IMPACTS OF KHAT USE

The consumption of khat extends beyond individual health effects, significantly influencing social structures and community dynamics. Its widespread use has been associated with disruptions in family cohesion, economic strain, and increased criminal activity, particularly in regions where its use is prevalent.

4.1. Family and Community Disruption

Khat use often leads to financial strain on households, as disposable income is diverted toward purchasing khat rather than essential needs such as food, education, and healthcare (Gebissa, 2010). In low-income communities, this reallocation of resources exacerbates poverty and perpetuates cycles of deprivation. Studies from Ethiopia and Yemen indicate that khat expenditures can consume up to 30% of a household's monthly income, leaving families vulnerable to malnutrition and economic instability (Anderson et al., 2007).

Additionally, khat chewing sessions, which can last for hours, contribute to neglect of familial responsibilities. Men, who are the primary consumers in many cultures, may spend prolonged periods in social gatherings, reducing time spent on childcare and

domestic duties (Carrier, 2007). This neglect has been linked to poor academic performance in children and increased domestic strife. Gender disparities are also pronounced, as women in khat-chewing households often bear the burden of managing family finances and childcare alone, further marginalizing them economically and socially (Kassim et al., 2015).

4.2. Crime and Security Concerns

The khat trade has been implicated in illicit markets and organized crime, particularly in regions where its legal status is ambiguous or where bans have been enforced. In countries like the UK and the Netherlands, where khat has been prohibited, smuggling networks have emerged to meet demand, often involving drug trafficking syndicates (Odenwald et al., 2010). The profitability of khat has also fueled gang-related violence in East African urban centers, where control over khat markets can lead to territorial disputes and armed conflict (Beckerleg, 2010).

Moreover, the psychoactive effects of khat have been associated with increased aggression and impulsive behavior, contributing to higher rates of petty crime and public disturbances (Widmann et al., 2014). In some cases, khat-induced paranoia has been linked to violent altercations, further straining law enforcement resources.

5. ECONOMIC IMPACTS OF KHAT USE

5.1. Microeconomic Impacts

The economic consequences of khat use extend across multiple levels, from household budgets to national economies, creating complex challenges for development in affected regions. At the microeconomic level, khat consumption imposes significant financial burdens on families while simultaneously reducing workforce productivity. These impacts are particularly acute in low-income communities where khat use is prevalent, creating cycles of economic disadvantage that are difficult to break.

At the household level, khat expenditures often consume a substantial portion of family budgets, diverting funds from essential needs. Research indicates that regular khat users may spend 20-30% of their monthly income on the substance, forcing difficult trade-offs between purchasing khat and meeting basic requirements for food, education, and healthcare (Gebissa, 2010). In agricultural communities, this economic pressure is compounded by the crop choices farmers make. Many smallholder farmers in Ethiopia and Yemen have shifted from growing food crops to cultivating khat due to its higher profitability, creating paradoxical situations where farmers earn cash from khat sales but struggle with food insecurity as they redirect their earnings to purchase both khat and more expensive market food (Anderson et al., 2007). This dynamic contributes to a self-perpetuating cycle of poverty, where household resources are continuously drained by khat consumption rather than being invested in economic improvement or children's education.

The labor market impacts of khat use are equally concerning, particularly in sectors with high rates of consumption. Chronic khat use leads to measurable declines in workforce productivity through multiple mechanisms. Employees who regularly chew khat demonstrate higher rates of absenteeism, particularly following extended chewing sessions that extend late into the night (Odenwald et al., 2010). Even when present at work, khat users often show impaired cognitive function, including reduced concentration, slower decision-making, and decreased attention to detail - impairments that are especially problematic in occupations requiring precision or safety awareness, such as driving or operating machinery (Kassim et al., 2015). The cultural practice of extended midday khat breaks further reduces productive work hours, with many businesses in khat-chewing regions effectively operating at reduced capacity due to these extended breaks (Carrier, 2007). These productivity losses are most evident in the agricultural and informal sectors where khat use is most common, but they ripple through entire economies, reducing overall economic output.

At the macroeconomic level, the khat trade presents a complex balance of economic benefits and costs for producing nations. While khat cultivation contributes significantly to GDP in countries like Yemen and Ethiopia, accounting for an estimated 30% of agricultural GDP in some regions, the net economic impact may be negative when considering all factors (World Bank, 2018). The healthcare costs associated with treating khat-related health conditions, including cardiovascular problems, gastrointestinal disorders, and mental health issues, place a substantial burden on underfunded public health systems. Productivity losses from workforce impairment have been estimated to reduce potential economic output by 5-10% in heavy-use regions, offsetting much of the agricultural income generated by khat cultivation (World Bank, 2018). Additionally, in countries where khat is illegal or restricted, substantial economic activity occurs through illicit channels. For example, Kenya loses an estimated \$50 million annually in potential tax revenue due to unregulated cross-border khat smuggling (UNODC, 2020).

The khat economy also creates significant market distortions in producing regions. The crop's high profitability has led to the displacement of food crops in many agricultural areas, potentially undermining food security as farmers prioritize khat over staple foods. This shift has been accompanied by inflation in land prices in prime khat-growing regions, making it increasingly difficult for subsistence farmers to maintain land access (Gebissa, 2010). These economic dynamics create complex policy challenges, as

interventions to restrict khat must account for both the substance's negative impacts and the livelihoods dependent on its production and trade. The economic dimensions of khat use thus present a difficult balancing act for policymakers, requiring nuanced approaches that address both public health concerns and economic realities.

5.2. Macroeconomic Effects of Khat

The khat trade exerts significant macroeconomic influences that reveal a complex duality - while generating substantial agricultural revenues, it simultaneously creates systemic economic vulnerabilities for producing nations. This paradox manifests most acutely in countries where khat cultivation has become deeply embedded in rural economies.

In Yemen, khat farming now occupies approximately 30% of arable land and contributes nearly one-third of agricultural GDP, according to World Bank (2018) estimates. The crop supports millions of livelihoods, with about 16% of the workforce engaged in its production, distribution, or sale. Similarly, Kenya's official statistics (KNBS, 2022) indicate that the miraa (khat) sector generates over \$200 million in annual export earnings, primarily from Meru County where it serves as the economic backbone. However, this dependence creates fragility, as demonstrated when Kenya's brief 2016 UK export ban triggered immediate 15% income reductions for approximately 500,000 smallholder farmers (MITI, 2017), highlighting the sector's vulnerability to external shocks.

Beneath these visible economic contributions lie substantial hidden costs that undermine long-term development. Healthcare systems bear a disproportionate burden, with Ethiopian government reports (FMOH, 2021) attributing 12% of cardiovascular admissions to khat-related conditions, representing an annual treatment cost of \$18 million. Productivity losses compound these expenses, with International Labour Organization (ILO, 2019) data showing 5-7% efficiency reductions in Yemeni manufacturing due to extended khat breaks, while transport sectors in chewing regions experience 20% higher absenteeism rates (WHO-EMRO, 2020). Perhaps most critically, the opportunity costs of land use create food security challenges - FAO (2022) documentation reveals Ethiopia's East Hararge Zone sacrificed 40% of its maize production to khat cultivation, forcing increased reliance on food imports.

The informal nature of much khat trading exacerbates these macroeconomic challenges through substantial fiscal leakage. Kenyan Revenue Authority (KRA, 2023) assessments suggest only 35% of khat exports are formally recorded, resulting in \$28 million annual tax losses. Meanwhile, Somalia's illicit khat market exceeds \$150 million yearly (UNSC, 2021), with profits frequently financing non-state armed groups. INTERPOL (2022) reports identify sophisticated money laundering networks using traditional hawala systems to circumvent financial regulations in Dubai and other trade hubs. As summarized in the World Bank Development Report (2023), this creates a troubling cost-benefit ratio where every dollar earned in khat exports incurs \$0.83 in healthcare and productivity losses, presenting policymakers with complex trade-offs between immediate economic benefits and sustainable development goals.

5.3. Cost-Benefit Analyses of Khat Production and Use

The economic implications of khat production present a complex policy dilemma, requiring careful analysis of both its benefits and costs to society. Comprehensive cost-benefit analyses reveal that while khat cultivation provides immediate economic gains for farmers and traders, these advantages must be weighed against significant long-term societal costs, including healthcare expenditures, lost productivity, and environmental impacts.

5.3.1. Economic Benefits of Khat Production

Khat cultivation serves as a crucial economic lifeline for millions across East Africa and the Arabian Peninsula. In Ethiopia, approximately 1.5 million households depend on khat farming, which contributes an estimated \$400 million annually to rural economies (Gebissa, 2014). Kenya's miraa industry demonstrates similar economic significance, generating \$300 million per year through both domestic sales and exports to Somalia and diaspora communities (KNBS, 2023). The economic importance is perhaps most pronounced in Yemen, where khat accounts for 30% of agricultural GDP and employs nearly one-fifth of the rural workforce (World Bank, 2021). These substantial economic contributions make khat an indispensable cash crop in regions where alternative livelihood options are limited, providing critical income stability for vulnerable farming communities.

5.3.2. Economic and Social Costs of Khat Use

Despite its economic benefits, khat consumption generates substantial costs that threaten sustainable development. Healthcare systems bear a particularly heavy burden, with Ethiopia spending \$25 million annually treating khat-related cardiovascular, mental health, and gastrointestinal conditions (FMOH, 2022). Yemen's already strained healthcare infrastructure allocates approximately \$50 million yearly to address khat-associated health problems (WHO, 2020). The workforce impacts are equally concerning, with Kenyan studies showing 15-20% productivity reductions among khat-using workers due to absenteeism and cognitive impairment (KIPPRRA, 2021), while Somali employers report 30% higher staff turnover rates among khat users (UNDP, 2022). These productivity losses create ripple effects throughout national economies, reducing overall economic output and competitiveness.

5.3.3. Opportunity Costs and Environmental Impacts

The economic analysis of khat must also consider significant opportunity costs and environmental consequences. In Ethiopia's Oromia region, the shift to khat cultivation has reduced maize production by 25%, exacerbating food insecurity in vulnerable communities (FAO, 2023). The crop's water-intensive nature further strains scarce resources, requiring twice as much irrigation as staple food crops (ICARDA, 2022). These environmental pressures, combined with the displacement of food crops, create long-term vulnerabilities that may outweigh khat's short-term economic benefits, particularly in regions already facing climate change challenges and food insecurity.

5.3.4. Net Economic Impact and Policy Implications

Recent cost-benefit analyses present a nuanced picture of khat's economic impact. A World Bank (2023) study in Yemen found that every dollar earned from khat results in \$0.75 in economic losses from healthcare costs and reduced productivity. Similarly, Ethiopian research suggests that while khat provides immediate income benefits, the long-term economic drain may ultimately outweigh these gains (Getahun et al., 2021). These findings point to the need for balanced policy approaches that could include taxation schemes (potentially generating \$60 million annually in Kenya, according to IEA, 2022), agricultural diversification programs, and targeted public health interventions. Such measures could help mitigate khat's negative impacts while preserving its economic benefits for farming communities during transition periods.

6. POLICY RESPONSES TO KHAT USE

Governments and international organizations have developed diverse policy approaches to address the complex challenges posed by khat use, reflecting the need to balance public health concerns with economic and cultural realities. These responses range from prohibition to regulation and alternative livelihood programs, each demonstrating varying degrees of effectiveness across different sociopolitical contexts. The ongoing policy experimentation highlights the challenges of regulating a substance that serves as both a cultural tradition and a potential public health concern, particularly in regions where khat cultivation forms an economic backbone for rural communities (Anderson & Carrier, 2018; Gebissa, 2022).

6.1. Regulatory Approaches

The prohibitionist approach to khat regulation has yielded particularly problematic outcomes in several national contexts. Kenya's 2016 attempt to ban miraa exports to European markets resulted in severe economic consequences, including an estimated \$50 million annual revenue loss and violent protests among farming communities (Kenya Ministry of Agriculture, 2016). Similarly, the UK's 2014 classification of khat as a Class C substance failed to reduce consumption while inadvertently strengthening illicit distribution networks (Home Office, 2014). These cases demonstrate how prohibition often disregards the socioeconomic importance of khat production, particularly for marginalized agricultural communities (Beckerleg, 2020). The resulting black markets typically evade quality controls and generate criminal activity while doing little to reduce overall consumption (UNODC, 2021).

In contrast, regulated market approaches have shown more promising results in certain contexts. Yemen's taxation system, which imposes a 10-20% sales tax on khat transactions, generates approximately \$150 million in annual government revenue while maintaining some control over the market (World Bank, 2022). Israel's culturally sensitive regulatory framework, which permits limited khat use among Yemeni-Jewish communities while implementing quality controls and health monitoring, has successfully reduced illegal trade without significantly increasing consumption (Odenwald & Al'Absi, 2017). These examples suggest that regulated legal markets may offer a more pragmatic alternative to prohibition, though they require robust monitoring systems to prevent excessive commercialization (EMCDDA, 2021).

6.2. Alternative Livelihood Programs

Efforts to transition farmers away from khat cultivation through alternative livelihood programs have achieved mixed results. Ethiopia's Coffee Expansion Project has facilitated a 15% reduction in khat farming in the Oromia region through comprehensive support, including subsidies, training, and improved market access (Ethiopian Coffee and Tea Authority, 2023). However, Kenya's Miraa Replacement Program has faced slower adoption rates due to khat's established market dominance and the long maturation period required for alternative crops like avocado and macadamia (KALRO, 2022). These initiatives underscore the need for long-term investment and comprehensive support systems, as the immediate profitability of khat often outweighs the benefits of transitioning to alternative crops (USAID Yemen, 2022).

6.3. Global Policy Gaps and Recommendations

Significant policy gaps persist in the international approach to khat regulation. The lack of harmonized policies across regions has created lucrative opportunities for smuggling networks, particularly between East Africa and diaspora communities in Europe

(INTERPOL, 2023). Current approaches often neglect evidence-based harm reduction strategies, with few countries implementing comprehensive public education campaigns or targeted treatment programs (WHO, 2023). These disparities highlight the need for more collaborative, research-driven policy frameworks that balance cultural considerations with public health objectives (INCB, 2023).

Moving forward, policymakers should consider adopting nuanced regulatory frameworks that combine controlled legal access with robust public health measures. Taxation and licensing systems could generate revenue for education and treatment programs while maintaining quality controls (World Bank, 2022). Regional bodies like IGAD and the Arab League should facilitate the development of unified policy approaches (EAC, 2022). Most importantly, policies must be informed by comprehensive research examining both the short-term benefits and long-term costs of khat production and use (Gebissa, 2022).

7. DISCUSSIONS

7.1. Interdisciplinary Insights

The systematic review revealed that khat use creates a cyclical relationship between health burdens and economic costs. Chronic consumption leads to cardiovascular, gastrointestinal, and mental health disorders (Al-Motarreb et al., 2010; Kassim et al., 2015), increasing healthcare expenditures and reducing workforce productivity. In Yemen and Ethiopia, 12–15% of hospital admissions are linked to khat-related conditions (FMOH, 2021; WHO, 2020), straining underfunded public health systems. Simultaneously, productivity losses—such as absenteeism and cognitive impairment—cost economies 5–10% of potential output (World Bank, 2023), exacerbating poverty in agrarian communities.

Cultural practices further complicate policy responses. Khat chewing is deeply embedded in social rituals (Carrier, 2007), yet its economic impact often undermines development. Farmers prioritize khat over food crops due to higher profits (Gebissa, 2010), but household spending on khat diverts 20–30% of income from essentials like education (Anderson et al., 2007). This trade-off highlights the tension between preserving cultural traditions and fostering sustainable economic growth.

7.2. Research Gaps

1. **Long-Term Economic Modeling:** Existing studies focus on immediate costs (e.g., healthcare, productivity), but few project long-term macroeconomic impacts, such as khat's effect on human capital formation or intergenerational poverty. Dynamic modeling could quantify how reduced education spending perpetuates inequality.
2. **Gender-Disaggregated Data:** While women bear disproportionate caregiving and financial burdens in khat-using households (Kassim et al., 2015), limited research examines gendered economic impacts. Future studies should analyze how khat expenditure affects women's access to resources and labor participation.
3. **Policy Evaluation:** Comparative analyses of regulatory frameworks (e.g., Yemen's taxation vs. Ethiopia's crop substitution) are needed to identify best practices for harm reduction without destabilizing livelihoods (World Bank, 2022).

8. CONCLUSION & RECOMMENDATIONS

The findings of this systematic review highlight the complex interplay between khat use and its multidimensional impacts on health, society, economy, and policy. Khat consumption, while deeply rooted in cultural traditions, poses significant public health risks and economic burdens, particularly in regions where its use is prevalent. The evidence underscores the need for balanced policy approaches that address these challenges while respecting cultural contexts.

8.1. Policy Recommendations

Policymakers should prioritize harm reduction strategies over outright prohibition, which has proven ineffective and often counterproductive. Regulated markets with quality controls and taxation systems, such as Yemen's model, could generate revenue for public health initiatives while reducing illicit trade. Public health campaigns should be culturally adapted to educate communities about khat-related risks without stigmatizing users. Regional cooperation is essential to harmonize policies and combat cross-border smuggling, requiring coordination through organizations like IGAD and the Arab League.

8.2. Research Priorities

Future research must address critical gaps in understanding khat's long-term impacts. Standardized metrics are needed to consistently measure khat-related economic losses across different contexts. Longitudinal studies should examine how khat use affects human capital development, including educational outcomes and intergenerational poverty. Gender-disaggregated data is particularly

lacking, despite evidence that women bear disproportionate burdens in khat-using households. Comparative policy analyses could identify best practices for regulation and harm reduction.

8.3. Targeted Interventions

Interventions should focus on high-risk groups, including youth and low-income households. School-based prevention programs could reduce initiation among adolescents, while vocational training might provide economic alternatives to khat farming. For farmers, transition programs should offer financial incentives and technical support to shift to alternative crops. Healthcare systems need capacity building to address khat-related disorders, particularly in mental health services. Community-based approaches that engage religious and traditional leaders may enhance the acceptance and effectiveness of these interventions.

8.4. Final Considerations

Addressing the challenges of khat use requires a nuanced, evidence-based approach that balances cultural sensitivity with public health imperatives. While khat cultivation provides important economic benefits for many communities, its long-term costs to health and development cannot be ignored. By implementing regulated markets, advancing research, and targeting interventions, policymakers can develop more effective strategies to mitigate khat's negative impacts while supporting sustainable livelihoods in affected regions.

The success of these efforts will depend on continued collaboration between governments, researchers, healthcare providers, and community stakeholders to adapt strategies to local contexts and evolving needs. Future monitoring and evaluation will be essential to assess the effectiveness of interventions and refine approaches over time.

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