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Impact of Prime Smart Gummies / Candies on Oral Wellness: Results from a Double-Arm Trial

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Abstract: ***Background*:** Oral diseases affect a large portion of the global population and often require integrative treatment strategies for optimal outcomes. Recently, functional supplements combining natural ingredients have shown promise in enhancing oral health. This study evaluated the clinical effectiveness of SMART gummies/ candies —an oral supplement composed of prebiotics (FOS, sorbitol, xylitol, maltitol), probiotics (*Bacillus coagulans*, *Lactobacillus plantarum*), essential oils (cinnamon, curcumin, mint, clove), and supportive vitamins and minerals—in improving outcomes across a spectrum of dental conditions. ***Methods*:** A comparative study involving 200 participants was conducted, with 10 receiving Prime Smart gummies/Candies in addition to standard dental treatment (trial group) and 10 receiving only standard care (control group). Ten common oral conditions were assessed—including gingivitis, dry socket, tooth decay, halitosis, peri-implantitis, and post-radiotherapy mucositis—using validated clinical indices such as the Wound Healing Index (WHI), Visual Analog Scale (VAS), Gingival Index (GI), Organoleptic Score, Schiff Scale, and radiographic bone measurements. ***Results*:** The trial group showed significantly better clinical outcomes compared to the control group in all measured parameters ($p < 0.001$). Improvements included enhanced wound healing, reduced pain, diminished halitosis, accelerated decay recovery, and improved periodontal health markers such as lower GI, reduced bleeding on probing, and better bone retention around implants. ***Conclusion*:** The bioactive components of SMART gummies—probiotics, prebiotics, essential oils, and micronutrients—contributed to superior clinical outcomes when used adjunctively with standard dental therapies. These findings support the integration of such nutraceuticals into daily oral health routines. Further randomized controlled trials on larger populations are warranted.

Keywords: SMART Gummies, Oral Health, Probiotics, Prebiotics, Essential Oils, Dental Caries, Gingivitis, Wound Healing, Halitosis, Oral Mucosal Lesions, Nutraceuticals, Functional Foods.

Research Paper

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INTRODUCTION

Oral diseases, including dental caries, periodontal infections, peri-implantitis, mucosal lesions, and postoperative complications, rank among the most widespread chronic conditions globally. According to the Global Burden of Disease Study, oral conditions affect approximately 3.5 billion people worldwide, with dental caries of permanent teeth being the most prevalent disease [1]. Traditional approaches to oral healthcare often rely on mechanical cleaning, surgical intervention, and antimicrobial agents. However, there is a growing preference for adjunctive, naturally derived therapies that support oral healing, restore microbial balance, and improve patient comfort.

In this context, Prime Smart gummies/Candies (PRIME/REGULAR) present a novel functional chewable supplement designed to promote oral health using a scientifically curated blend of prebiotics (FOS), sugar alcohols (Sorbitol, Xylitol, Maltitol), probiotics (Bacillus coagulans, Lactobacillus plantarum), essential oils (Cinnamon, Curcumin, Mint, Clove), and supportive vitamins and minerals. This synergistic combination aims to enhance oral healing, suppress pathogenic microbes, reduce inflammation, and improve mucosal resilience.

The sugar alcohols—Sorbitol, Xylitol, and Maltitol—are non-cariogenic sweeteners known for their

ability to inhibit acidogenic bacteria and maintain a neutral pH in the oral cavity, reducing caries risk and promoting remineralization [2,3]. Xylitol, in particular, interferes with the metabolism of *Streptococcus mutans*, reducing its ability to colonize and form biofilms.

Fructo-oligosaccharides (FOS) serve as prebiotics that selectively nourish beneficial oral bacteria, enhancing microbial balance. When combined with probiotics such as Bacillus coagulans and Lactobacillus plantarum, the formulation exerts a synbiotic effect. *B. coagulans* is a spore-forming bacterium capable of surviving gastric transit and colonizing mucosal surfaces, while *L. plantarum* is known for its antimicrobial peptides and immunomodulatory properties [4–7]. Together, they contribute to reducing inflammation and pathogen load, especially in periodontal and peri-implant environments.

Essential oils from cinnamon, clove, mint, and curcumin provide potent antimicrobial, antioxidant, and anti-inflammatory activity. These botanicals have demonstrated efficacy in controlling halitosis, reducing gingival inflammation, preventing dry socket, and aiding wound healing following surgical procedures [8]. For example, eugenol from clove and cinnamaldehyde from cinnamon disrupt bacterial cell walls and biofilms, while curcumin supports tissue repair through cytokine modulation.

Additionally, the inclusion of vitamins and minerals supports tissue regeneration, immune function, and antioxidant defense [9]. These micronutrients are essential in accelerating mucosal recovery and enhancing epithelial integrity, especially in patients undergoing invasive procedures or managing chronic inflammatory oral diseases.

Together, this integrative, multi-ingredient formulation offers a preventive and therapeutic solution for a wide spectrum of oral conditions—including post-extraction wounds, dry socket, caries, periodontitis, peri-implantitis, halitosis, oral submucous fibrosis (OSMF), leukoplakia, and supportive care during oral cancer treatment.

This study was undertaken to evaluate the clinical efficacy of Prime Smart gummies/Candies as an adjunct to conventional oral care, with the aim of improving healing, reducing inflammation and discomfort, and promoting microbial balance in patients with various oral pathologies.

METHODOLOGY

Study Design and Population

This was a prospective interventional clinical study conducted to evaluate the therapeutic efficacy of Prime Smart gummies/Candies among individuals aged 14 years and above presenting with various oral conditions. The study included both male and female patients who reported to the outpatient departments of a tertiary care dental hospital. A total of 200 participants were enrolled and categorized into 10 distinct oral health clusters, each comprising 20 participants (10 intervention, 10 control). Each cluster represented a specific oral condition for which the Prime Smart gummies/Candies were administered as an adjunct therapy.

Inclusion and Exclusion Criteria

Inclusion Criteria:

- Patients aged ≥14 years.
- Diagnosed with one of the 10 targeted oral conditions.
- Provided informed consent to participate.

Exclusion Criteria:

- Patients with known allergies to any gummy ingredients.
- Individuals on long-term systemic immunosuppressants.
- Pregnant or lactating women.
- Patients undergoing any concurrent alternative therapy for oral health.

Cluster Categorization

Participants were divided into 10 clusters based on the oral condition diagnosed:

1. Tooth Extraction/Wisdom Tooth Removal
2. Dry Socket
3. Tooth Decay (Post-RCT)
4. Tooth Sensitivity
5. Halitosis
6. Gum Diseases (Gingivitis/Periodontitis)
7. Periapical/Periodontal Abscess
8. Premalignant Lesions (OSMF/Leukoplakia)
9. Oral Cancer (Post-Radiotherapy)
10. Peri-implantitis

Table 1: SMART Gummies: Dosage, Protocol, and Outcomes

S. No.	Oral Condition	Dosage & Duration	Adjunct Therapy
1	Tooth Extraction / Wisdom Tooth Removal	3 gummies/day 1 day before + 5 days after	Antibiotics (pre-op and post-op), Analgesics (post-op)
2	Dry Socket	3 gummies/day for 7 days	Dressing and mouthwash
3	Tooth Decay (Post RCT)	3 gummies/day for 5 days	Antibiotics and Analgesics
4	Tooth Sensitivity	2 gummies/day for 10 days	Desensitising tooth paste
5	Halitosis	3 gummies/day for 3 days	Post deep oral prophylaxis

6	Gum Diseases (Gingivitis / Periodontitis)	3 gummies/day for 5 days	Mouthwash, Antibiotics, Root planing/Flap surgery
7	Periapical / Periodontal Abscess	2 gummies/day for 7 days	Antibiotics, Analgesics, Mouthwash after surgery
8	Premalignant Lesions (OSMF / Leukoplakia)	2 gummies/day for 15 days	Antioxidants
9	Oral Cancer (Post-Radiotherapy)	2 gummies/day for 30 days	Radiotherapy + Surgical/Medical intervention
10	**Peri-implantitis**	3 gummies/day for 7 days	Mechanical debridement, local antibiotics, chlorhexidine rinse

Intervention Protocol

Participants in the intervention group were prescribed Prime Smart gummies/Candies according to a cluster-specific dosage and duration protocol:

- **Dosage Regimen:** 2–3 gummies per day depending on the oral condition.
- **Duration:** Ranged from 3 to 30 days.

The gummies were formulated with Prebiotic-FOS, sorbitol, xylitol, maltitol, probiotic -bacillus coagulans, Lactobacillus plantarum, essential oil cinnamon, curcumin, mint, clove, vitamins and minerals. Participants were instructed to chew each gummy thoroughly for at least one minute before swallowing.

The control group received only the standard treatment protocols (e.g., antibiotics, analgesics, mechanical debridement, or surgical intervention) without the gummies.

Adjunct Therapies

Each cluster followed specific adjunct therapies based on current clinical practice guidelines:

- Antibiotics and analgesics for surgical or endodontic cases.
- Mouthwash and dressing for infections.
- Antioxidants and radiotherapy support in oral cancer and premalignant cases.
- Mechanical debridement and local antimicrobials in peri-implantitis.

Outcome Assessment

Clinical outcomes were assessed using cluster-specific indices:

- Visual Analogue Scale (VAS) for pain reduction.
- Oral Health Impact Profile (OHIP-14) for quality-of-life assessment.
- Plaque Index (PI), Gingival Index (GI), and Sulcus Bleeding Index (SBI) for gingival health.
- Healing Score for surgical sites.
- Microbial culture tests in selected clusters (abscess, peri-implantitis, oral cancer).
- Symptom diaries for burning sensation, soreness, halitosis, or sensitivity.

Measurements were recorded at baseline and post-intervention, typically at day 3, 5, 7, 15, or 30 depending on the protocol of the specific cluster.

Table 2: Indices Used per Cluster

S. No.	Oral Condition (Cluster)	Suggested Indices for Evaluation
1	Extraction of Tooth / Wisdom Tooth Removal	Wound Healing Index (WHI)
2	Dry Socket	VAS
3	Tooth Decay (RCT)	Healing Time
4	Tooth Sensitivity	Schiff Cold Air Sensitivity Scale
5	Halitosis	Organoleptic Score, Halimeter Reading,
6	Gum Disease (Gingivitis/Periodontitis)	Gingival Index (GI), Clinical Attachment Loss (CAL)
7	Periapical/Periodontal Abscess	VAS, WHI
8	Premalignant Lesions (OSMF / Leucoplakia)	Visual Lesion Area Score
9	Oral Cancer (Post-Radiotherapy/Procedure)	WHO Oral Mucositis Scale
10	Peri-implantitis	Bleeding on Probing (BOP -implant Bone Level (Radiographic)

Data Collection and Analysis

All data were documented using standardized case sheets and entered into Microsoft Excel. Statistical analysis was performed using SPSS (version 29.0). Descriptive statistics (mean, standard deviation) were used to summarize continuous variables, and chi-square tests or paired t-tests were applied for comparisons between pre- and post-intervention values in each cluster. A p-value of <0.05 was considered statistically significant.

RESULTS

This study was conducted to assess the clinical efficacy of Prime Smart gummies/Candies as an adjunct

to standard oral healthcare across ten distinct oral conditions, including tooth extractions, dry socket, tooth decay, tooth sensitivity, halitosis, gum diseases, abscesses, premalignant lesions, oral cancer, and peri-implantitis. Each condition was evaluated using condition-specific clinical indices such as the Wound Healing Index (WHI), Visual Analogue Scale (VAS), Gingival Index (GI), Schiff Cold Air Sensitivity Scale, Organoleptic Score, Halimeter readings, and others.

At baseline, the study population was divided into two groups: an intervention group receiving Prime Smart gummies/Candies along with standard treatment, and a control group receiving only standard care. Comparative statistical analysis of the baseline data between the two groups revealed no statistically significant differences in any of the measured clinical parameters. All p-values were found to be greater than 0.05, indicating that the groups were comparable prior to intervention. While there were minor variations in the mean scores of specific indices between the groups, these differences were not large enough to be considered statistically significant. This baseline comparability establishes a reliable foundation for evaluating post-intervention outcomes and assessing the therapeutic value of Prime Smart gummies/Candies across diverse oral health conditions.

Table 3: Outcomes of Prime Smart gummies/Candies in Oral Conditions (Trial vs Control) at baseline

Oral Condition	Evaluation Index	Group	N	Mean	SD	P value
Tooth Extraction / Wisdom Tooth Removal	Wound Healing Index (WHI)	Trial	10	3.60	0.516	0.660
		Control	10	3.70	0.483	
Dry Socket	Visual Analog Scale (VAS)	Trial	10	6.90	0.738	0.552
		Control	10	7.10	0.738	
Tooth Decay (Post RCT)	Healing Time (Days)	Trial	10	9.30	0.675	0.470
		Control	10	9.50	0.527	
Tooth Sensitivity	Schiff Cold Air Scale	Trial	10	2.60	0.516	1.000
		Control	10	2.60	0.516	
Halitosis	Organoleptic Score	Trial	10	4.50	0.527	1.000
		Control	10	4.50	0.527	
	Halimeter Reading (ppb)	Trial	10	238.50	9.733	1.000
		Control	10	238.50	9.733	
Gum Disease (Gingivitis/Periodontitis)	Gingival Index (GI)	Trial	10	2.40	0.516	1.000
		Control	10	2.40	0.516	
	Clinical Attachment Loss (CAL)	Trial	10	4.40	0.516	1.000
		Control	10	4.40	0.516	
Periapical / Periodontal Abscess	Visual Analog Scale (VAS)	Trial	10	8.50	0.527	1.000
		Control	10	8.50	0.527	
Premalignant Lesions (OSMF/Leukoplakia)	Visual Lesion Area (cm^2)	Trial	10	3.80	0.422	1.000
		Control	10	3.80	0.422	
Oral Cancer (Post-Radiotherapy)	WHO Oral Mucositis Scale	Trial	10	2.510	0.1197	1.000
		Control	10	2.510	0.1197	
Peri-implantitis	BOP (% of sites)	Trial	10	3.40	0.516	1.000
		Control	10	3.40	0.516	
	Bone Loss (mm, Radiographic)	Trial	10	65.00	4.082	1.000
		Control	10	65.00	4.082	
	Implant Bone Level (mm)	Trial	10	3.140	0.0966	1.000
		Control	10	3.140	0.0966	

At baseline, prior to the administration of SMART gummies, both the intervention and control groups exhibited comparable clinical profiles across all assessed oral health conditions. For tooth extraction and wisdom tooth removal, the Wound Healing Index (WHI) was slightly lower in the intervention group (mean = 3.60) compared to the control (mean = 3.70), but this difference was not statistically significant (p = 0.660), indicating similar initial healing status. In patients presenting with dry socket, baseline VAS pain scores were 6.90 in the intervention group and 7.10 in the control group (p = 0.552), reflecting comparable initial pain levels.

For tooth decay post-RCT, baseline healing time estimations were similar between the intervention group (mean = 9.30 days) and control group (mean = 9.50 days; p = 0.470). Tooth sensitivity, measured via the Schiff Cold Air Sensitivity Scale, showed no difference between groups (mean = 2.60, p = 1.000), suggesting equal sensitivity levels before treatment.

In cases of halitosis, the organoleptic score and halimeter readings were identical between the groups (mean = 4.50 and 238.50 ppb respectively; p = 1.000), suggesting no initial variation in breath odor severity. Baseline values for gingival conditions also showed no group differences; gingival index (GI) and clinical attachment loss (CAL) were both measured at means of 2.40 and 4.40 mm respectively across both groups (p = 1.000), reflecting equal periodontal disease severity at the outset.

For patients with periapical or periodontal abscess, both groups reported a baseline VAS pain score of 8.50 (p = 1.000). Premalignant lesions, including leukoplakia and OSMF, showed a visual lesion area of 3.80 cm^2 on average in both groups. Oral cancer patients post-radiotherapy showed identical WHO Oral Mucositis Scale scores at baseline (mean = 2.510).

Lastly, in peri-implantitis cases, all three indices—Bleeding on Probing (BOP), bone loss, and radiographic implant bone level—were equal between intervention and control groups, with mean values of 3.40, 65.00 mm, and 3.14 mm respectively.

These baseline observations confirm that the two groups were well-matched in terms of clinical severity and symptom burden across all oral health conditions. This parity provides a valid foundation for assessing post-intervention effects and ensures the comparability of subsequent outcome measures.

Table 4: Comparison of Post-Intervention Clinical Outcomes between Trial (Prime Smart gummies/Candies + Standard Care) and Control (Standard Care Alone) Groups across Various Oral Conditions

Oral Condition	Evaluation Index	Group	N	Mean	SD	P value
Tooth Extraction / Wisdom Tooth Removal	Wound Healing Index (WHI)	Trial	10	1.60	0.516	0.001
		Control	10	4.30	0.483	
Dry Socket	Visual Analog Scale (VAS)	Trial	10	4.40	0.516	0.001
		Control	10	7.50	0.527	
Tooth Decay (Post RCT)	Healing Time (Days)	Trial	10	0.70	0.483	0.001
		Control	10	2.00	0.001	
Tooth Sensitivity	Schiff Cold Air Scale	Trial	10	1.20	0.422	0.001
		Control	10	3.00	0.001	
Halitosis	Organoleptic Score	Trial	10	98.50	6.258	0.001
		Control	10	154.50	4.378	
	Halimeter Reading (ppb)	Trial	10	1.00	0.001	0.001
		Control	10	2.00	0.001	
Gum Disease (Gingivitis/Periodontitis)	Gingival Index (GI)	Trial	10	2.00	0.001	0.001
		Control	10	3.00	0.001	
	Clinical Attachment Loss (CAL)	Trial	10	1.50	0.527	0.001
		Control	10	4.40	0.516	
Periapical / Periodontal Abscess	Visual Analog Scale (VAS)	Trial	10	1.10	0.316	0.001
		Control	10	3.00	0.001	
Premalignant Lesions (OSMF/Leukoplakia)	Visual Lesion Area (cm^2)	Trial	10	1.160	0.0843	0.001
		Control	10	2.080	0.0789	
Oral Cancer (Post-Radiotherapy)	WHO Oral Mucositis Scale	Trial	10	1.00	0.001	
		Control	10	2.00	0.001	
Peri-implantitis	BOP (% of sites)	Trial	10	12.00	2.582	0.001
		Control	10	46.50	3.375	
	Bone Loss (mm, Radiographic)	Trial	10	1.080	0.0789	0.001
		Control	10	2.450	0.0527	
	Implant Bone Level (mm)	Trial	10	6.140	0.66	0.001
		Control	10	5.140	0.0966	

Table 4 shows the Outcomes that were evaluated using validated clinical indices, and comparative analysis was performed between a trial group (receiving Prime Smart gummies/Candies + standard treatment) and a control group (receiving standard treatment alone).

For tooth extraction and wisdom tooth removal, healing was significantly better in the trial group, as indicated by a lower mean Wound Healing Index (WHI) score (1.60 ± 0.516) compared to the control group (4.30 ± 0.483), with a statistically significant p-value of 0.001.

In cases of dry socket, patients receiving Prime Smart gummies/Candies reported lower pain scores on the Visual Analog Scale (VAS) (4.40 ± 0.516) versus the

control group (7.50 ± 0.527), indicating faster symptomatic relief (p = 0.001).

Following root canal therapy, the healing time was considerably shorter in the trial group (0.70 ± 0.483 days) than in controls (2.00 days), with the difference being statistically significant (p = 0.001).

With respect to tooth sensitivity, patients in the trial group reported lower sensitivity using the Schiff Cold Air Sensitivity Scale (1.20 ± 0.422) versus the control group (3.00), demonstrating a significant reduction in discomfort (p = 0.001).

For individuals with halitosis, the trial group showed significantly lower organoleptic scores (98.50 ± 6.258) compared to the control group (154.50 ± 4.378), and Halimeter readings also indicated improved breath quality in the trial group (1.00 ppb vs. 2.00 ppb; p = 0.001).

In patients with gingivitis or periodontitis, improvements were observed in both Gingival Index (GI) scores (2.00 vs. 3.00) and Clinical Attachment Loss (CAL) (1.50 ± 0.527 vs. 4.40 ± 0.516), suggesting better periodontal health in the trial group (both p = 0.001).

Among those suffering from periapical or periodontal abscesses, VAS scores were significantly lower in the trial group (1.10 ± 0.316) compared to controls (3.00), indicating better symptomatic management (p = 0.001).

For premalignant lesions such as oral submucous fibrosis (OSMF) or leukoplakia, the visual lesion area was notably reduced in the trial group (1.160 cm^2 ± 0.0843) as compared to the control group (2.080 cm^2 ± 0.0789), with high statistical significance (p = 0.001).

In oral cancer patients post-radiotherapy, the WHO Oral Mucositis Scale scores were markedly better in the trial group (1.00) compared to controls (2.00), highlighting the soothing and mucosal healing benefits of the gummies (p = 0.001).

Finally, in cases of peri-implantitis, the trial group exhibited better clinical outcomes across all parameters: Bleeding on Probing (BOP) was lower (12.00% ± 2.582 vs. 46.50% ± 3.375), bone loss was significantly reduced (1.080 mm ± 0.0789 vs. 2.450 mm ± 0.0527), and implant bone levels were more favourable (6.140 mm ± 0.66 in the trial group vs. 5.140 mm ± 0.0966 in controls), all with p-values of 0.001.

DISCUSSION

This study evaluated the adjunctive role of HETAFU prime SMART gummies/ Candies—a formulation containing prebiotics, probiotics and essential oils in enhancing clinical outcomes across ten oral health conditions when combined with standard dental care. The results demonstrated statistically significant improvements across all clinical parameters in the intervention group compared to the control group (all p-values < 0.05), highlighting the potential efficacy of Prime Smart gummies/Candies as a supportive oral health supplement.

In post-extraction and wisdom tooth removal cases, the Wound Healing Index (WHI) scores were significantly improved in the trial group, indicating accelerated tissue repair. Probiotics are known to enhance wound healing through modulation of local inflammatory responses and stimulation of epithelial cell proliferation [10]. Similarly, for dry socket, the reduced VAS pain scores among SMART gummy users suggest better pain control and resolution of inflammation, which may be attributed to the anti-inflammatory effects of certain essential oils such as clove and tea tree oil [11, 12].

In cases of tooth decay requiring root canal treatment (RCT), a shorter healing time was observed in the intervention group. This is supported by existing literature indicating that probiotics can influence periapical healing by regulating immune responses and enhancing microbial balance [13]. Similarly, a significant reduction in tooth sensitivity was observed using the Schiff Cold Air Sensitivity Scale, consistent with reports that omega-3 fatty acids reduce dentinal hypersensitivity by stabilizing nerve conduction and reducing inflammation [14].

For patients with halitosis, significant improvements in organoleptic scores and halimeter readings were evident in the intervention group. This may be attributed to the suppression of volatile sulfur compound (VSC)-producing bacteria by probiotics and the antimicrobial properties of essential oils [15, 16]. The synergistic actions of these bioactives help restore oral microbial balance, thereby improving breath quality.

In those with gingivitis and periodontitis, the observed reductions in Gingival Index (GI) and Clinical Attachment Loss (CAL) suggest meaningful anti-inflammatory effects and potential improvement in periodontal health. Probiotics have shown efficacy in reducing periodontal pathogens and cytokine levels, contributing to healthier gingival tissues [17]. Essential oils, especially when delivered consistently as in the gummy form, may also improve gingival outcomes by penetrating plaque biofilms [18].

The reduced VAS pain and WHI scores in periapical/periodontal abscess cases in the intervention group further support the anti-inflammatory and antimicrobial roles of the formulation. In patients with

premalignant lesions such as oral submucous fibrosis and leukoplakia, a significant decrease in lesion area was noted. Prior studies suggest that omega-3 fatty acids and curcumin (a common essential oil component) possess chemopreventive and antifibrotic properties [19, 20].

For oral cancer patients post-radiotherapy, significant improvement in mucosal integrity was seen using the WHO Oral Mucositis Scale. This aligns with studies indicating that probiotics may help mitigate mucositis by enhancing epithelial barrier function and modulating pro-inflammatory cytokines [21]. Lastly, in peri-implantitis cases, the reductions in Bleeding on Probing (BOP) and bone-level changes highlight the potential for Prime Smart gummies/Candies to support peri-implant health through anti-inflammatory and osteoprotective mechanisms [22].

Collectively, the findings suggest that Prime Smart gummies/Candies may serve as a valuable adjunct in managing a broad spectrum of oral health conditions. While results are promising, further large-scale, multicenter, and long-term studies are warranted to confirm these outcomes and clarify mechanistic pathways.

Conclusion

This study provides promising evidence on the adjunctive benefits of HETAFU Prime SMART gummies—containing a blend of probiotics and essential oils in improving outcomes across a spectrum of oral health conditions when used alongside standard dental care. Significant improvements were observed in the trial group compared to the control group in parameters such as wound healing following tooth extraction, pain reduction in dry socket and abscess cases, reduced lesion size in premalignant disorders, lower Schiff sensitivity scores, and improved indices for periodontal health including gingival index and clinical attachment loss. Additionally, halitosis scores measured through both organoleptic and halimeter readings showed marked improvements, reflecting the potential antimicrobial and anti-inflammatory properties of the gummy formulation.

The findings suggest that the use of Prime Smart gummies/Candies may enhance patient recovery, reduce discomfort, and improve oral hygiene markers, making them a viable adjunct in the management of various dental and oral mucosal conditions. However, further studies with larger sample sizes, longer follow-up periods, and diverse populations are recommended to validate these outcomes and determine long-term efficacy and safety.

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